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ABSTRACT

The seven papers that comprise this book were presented at the 1977 National Art Education Association Conference on Reading, the Arts, and the Creation of Meaning held to bring together people in the arts and the fields of reading, psychology, and philosophy to explore the relationships that exist between these fields of study. Topics discussed in the book include: reading and the creation of meaning, reading for nonliteral meaning, the basics of reading, the picturebook as an art object, reading as the "great American fetish," metaphorical perception, and art, criticism, and reading. Authors are Elliot W. Eisner, Gabriele Lusser Rico, Kenneth S. Goodman, Kenneth Marantz, Malcolm P. Douglas, D.N. Perkins, and Edmund Burke Feldman. (JF)

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Reading, the Arts, and the Creation of Meaning

ELLIOT W. EISNER,
Editor

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Contents

Introduction
Elliot W. Eisner 7

Reading and the Creation of Meaning
Elliot W. Eisner 13

Reading for Non-Literal Meaning
Gabriele Lusser Rico 33

What is Basic About Reading?
Kenneth S. Goodman 55

On the Mysteries of Reading and Art: The Picturebook as Art Object
Kenneth Marantz 71

On Reading: The Great American Fetish
Malcolm P. Douglass 89

Metaphorical Perception
D. N. Perkins 111

Art, Criticism, Reading
Edmund Burke Feldman 141

About the Authors 158

Introduction

ELLIOT W. EISNER

THE ARTICLES IN THIS book represent an effort to describe the relationships between the forms of cognition used to read text and those used to read visual art. In our vernacular we recognize a commonality that cuts across a large number of apparently diverse fields of human activity. We say, for example, that we read music as well as poetry, paintings as well as faces; that body posture is a language that we learn to read; and that even tea leaves, palms, and futures can be read. But what does it mean to read novels or works of visual art? Does our use of the vernacular simply represent the sloppy use of language, or does it represent an intuitive grasp of the way our minds construe meaning from patterned events and objects, even if the "grammar" for such events and objects cannot be articulated?

Furthermore, what kinds of cognitive processes are used in reading text, and how do these processes compare to those used to secure meaning from visual images? To what extent do those processes overlap, and what

is the nature of their differences? What are the means through which content is conveyed in text and in visual art, and is one form better suited to some kinds of content than others? If people do not in fact read visual images, then how do they secure information from them and why do advertisers spend such large sums to get their messages across to the public through the visual images used in television, film, newspapers, and magazines?

Questions such as these represent only a fragment of the kinds of questions that can be asked about reading as a generic process and its relationship to the variety of expressive modes or symbol systems that we use in our culture. Such questions are important ones, not only for those interested in the study of cognition per se, but for those attempting to develop educational programs for the young. Understanding the ways in which humans create meaning and providing an environment and curriculum that will refine and expand the skills for doing so are major concerns—or should be—for anyone who regards education as a way of helping people increase their ability to secure meaning from experience. Yet the process of meaning making, particularly with reference to a generic conception of reading, has been neglected in education as well as in psychology. Educators concerned with reading have focused on the development of technical reading skills and have confined those skills to the reading of text. Psychologists have focused upon the processes that make the use of such skills possible but have neglected the unique characteristics of the content to which those skills are to be applied. This has created a virtual vacuum in the study of reading as a generic human ability on the one hand, and the specific demands of content on the other. What is needed is an approach to reading that conceptualizes reading as the generic process through which humans make meaning, that examines the psychological processes through which such meanings are made, and which takes into account in such inquiry the unique features of the symbol systems in which such meanings are couched. To conceive of reading as limited to text is to disregard our intuitive recognition that the construction of meaning from the perception of patterned stimuli is ubiquitous in human life and a skill necessary for survival. To study psychological processes as though they could operate without a specific content is to embrace a belief that is a logical impossibility. Content and process are two sides of the same coin.

The issues and questions I have raised, as I have already indicated, are only a small portion of those that could be raised in the study of read-

ing. The papers that are included here will not provide answers to these questions, but they will provide a sparkling array of imaginative ideas bearing upon them. The papers are serious efforts by serious scholars to explore a territory that has been largely neglected in education and psychology: the interstices of reading text and reading visual images. The articles are not easy ones to read, not because they are not clear but because they are complex and sophisticated. Indeed, I believe they open up some new ground for inquiry in this no-man's land. Furthermore, this is the first time that scholars in visual arts education have collaborated with those in the psychology of reading and in philosophy to address the problems of reading. We have in the past worked alone, within the boundaries of our own professional field, have published in our own journals, and have, in general, acted as if others did not exist. Because of the collaboration—if for no other reason—the present volume is something of a milestone.

We live at a time in the history of American education in which the pressures to teach children to read have never been greater. The public seems to believe that children cannot read as well as they once were able and that schools need to go "back to the basics" to recapture the educational quality of the past. For arts education this has meant a gradual but ineluctable shift away from the arts and an almost exclusive emphasis on reading and the other two Rs. For some, arts education's salvation appears in the form of a life raft bearing the flag of reading skills. The arts in general and the visual arts in particular are somehow to be justified by their contribution to the reading of text. Those who hope to find justifications for such a view in this volume will be disappointed. This book provides neither a life-raft nor a bandwagon. Its authors have nothing to sell. What it does provide is a series of stimulating and provocative essays on reading, the arts, and the ways in which humans create meaning. It raises questions and provides attractive leads; it offers ideas with which one can work, but it does not attempt to sell a view that the teaching of art is the answer to our nation's reading problems.

This book was stimulated by a conference sponsored by the National Art Education Association on Reading, the Arts and the Creation of Meaning which was held in New York City in January of 1977. That conference represented an effort by the National Art Education Association to bring together people in the arts and the fields of reading, psychology, and philosophy to explore relationships the conference theme represented. All of the papers included in this volume, with the exception of

mine, were prepared especially for this volume. My paper was prepared initially for the Claremont Reading Conference and was later modified for use in New York.

The conference which was held in New York City attracted over 500 people, largely due to the indefatigable work of the person who served with me as co-chair, Dorothy Evans. Mrs. Evans made the local arrangements, contacted local presenters, handled publicity, arranged for facilities on Roosevelt Island and at the New School for Social Research where the Conference was held, and cared for the numerous details that successful conference planning entails. She did all of this while I was nestled comfortably in Stanford. She has my gratitude for the effort she expended. I also wish to thank the Alliance for Arts Education which provided the funds that made the project possible.

Finally, I hope that this volume and the conference that generated it will be only the beginning of a series of activities that will bring together individuals in different fields sharing common problems. All of us need new places from which to see the terrain. Collaborative efforts often provide them. I leave it to the reader to determine whether this volume has provided some fresh vistas.

Elliot W. Eisner
President
National Art Education Association
January, 1978

Reading and the Creation of Meaning

ELLIOT W. EISNER

I COME TO YOU today not as an expert in the field of reading, but as someone deeply concerned with the problems of education and the ways in which human beings create meaning. This interest of mine in the creation of meaning grows primarily from my work in the arts. I have been involved in the arts for as long as I can remember. First, in elementary school where drawing and painting were sources of my salvation in an environment that I often found boring and at times even painful, and later in secondary school, where the arts became an oasis in an otherwise

*This paper was initially given as the Keynote Address to the Claremont Reading Conference, February 6, 1976, Claremont, California.

I wish to express my gratitude to my students Keith Jones, Gail McCutcheon, and Ann Sherman for helpful critical comments while I was preparing my manuscript. I also wish to express my thanks to my colleague Professor William Iverson, a specialist in reading, for reassuring me that what I had to say was not completely off the track.

arid educational climate. After secondary school I worked in the visual arts at the Art Institute of Chicago and later at the Institute of Design, the new Bauhaus established at the Illinois Institute of Technology. I then taught art in the Chicago public schools and later in the Laboratory School of the University of Chicago.

My roots, as you can see, grow out of the arts, and these sources, although I did not know it at the time, have generated a deep interest in trying to understand how people make sense of the world and what schools can do to further this process along. Thus the title of my paper: Reading and the Creation of Meaning.

The major thesis of my remarks deals with the belief that the creation of meaning is a biologically determined need of the human organism. Human organisms, as Aristotle pointed out long ago, by nature seek to know. We are condemned, it seems, to searching for a life of meaning. Trying to negotiate the environment in which we live, trying to determine who is friend and who is foe, trying to apply the social codes we learn through our social experience, these are the ubiquitous and defining characteristics of our nature. This process of creating meaning is largely a matter of learning to read. But here I am speaking of reading as a generic human process of decoding the expressive forms we create as social organisms. It is a process not limited solely to the written word. When we speak of reading, particularly in the context of schooling, we think of it as a process dealing with the words, sentences, and paragraphs found in books, articles, and stories. And it is true that reading these codes in these forms is a crucially important social act. But reading can also be thought of as any process that involves the decoding of any type of expressive form, whether it is constructed intentionally or not. Reading in this sense is so pervasive an aspect of our existence that we have become desensitized to the ways in which we read and the range of material to which it is applied.

There are, of course, a variety of sensory modalities or knowledge systems* through which each of us comes into contact with the world. We come to know things in many ways. For example, our conception of where we live, our homes, our neighborhoods, our communities, are known to us not simply in the form of the linguistic concepts called "home," "neigh-

*I owe a debt to Professor Sheldon White of Harvard University for calling my attention to the concept of knowledge systems. Much of what I have to say on this matter was stimulated by his comments on this subject.

borhood," or "community," they are known to us by their visual features, their smells, the kind of body movement that they permit and encourage, by what they express symbolically, by their taste, and by their pervasive emotional quality. Most of us who have taught a number of years would know we were in a classroom or a school even if our eyes were blindfolded. We know most of what we know not in one way, but in a variety of ways. Each of our sensory modalities puts us in contact with the environment, and each modality enables us to create a knowledge system that we use to know and express our conceptions of reality. Our conceptions of that reality are not only linguistic, they are visual, gustatory, kinesthetic, and even more. Knowing something means knowing it, at least in principle, in the variety of ways in which it can be known. This conception of the nature of reading, and the idea that human knowing and human knowledge are divided into several systems, enables us to recognize that man has used his intelligence to create expressive forms in each of the systems and modalities that he has been able to use. Meaning is constructed by forming patterns that eventually become codes which carry meaning within them. Creating meaning requires the ability to use the coding system in a way that will disclose what it is the expressive form contains or implies.

Our knowledge of these patterns or codes creates a type of regularity that makes predictability possible, and predictability is a source of security in a world which we must negotiate. For example, each of us develops, through the course of our lives, a style, a personal expressive plot that others learn to read. Their ability to read our personal plot makes them able to deal with us in socially acceptable ways. They know when we've had enough, when we are elated, frustrated, bored, intrigued, satisfied, chagrined. They learn to decode our behavior, our animation, our gestures, so that their intercourse with us will be constructive. In short, they get to know us by learning to read the individual forms of expressiveness that define our personal style of life.

The decoding of expressive forms is, of course, not limited to so-called "body language." We learn to read architectural forms, the forms that constitute music; we learn to read restaurant interiors, paintings, and sculptures, the forms of sport, as well as the forms that we find on the printed page. Indeed, the ability to create and reconstruct meaning in these various forms, forms that materialize in and address themselves to a range of knowledge systems, is much of what both education as a process and ordinary life are all about. What it means to know within the various forms of social discourse in which we participate means knowing their

parameters, intentions, and coding systems. Thus the first point that I wish to make is that man has a biological need to create meaning out of the world in which he lives. The second point is that reading is a generic process of decoding the expressive forms created by man, so that the meanings within those forms can be recovered. It is in no way limited to those forms called "words" or "numbers." All of us read so extensively and in so many spheres of life that we often fail to appreciate how extensive and pervasive the process of reading really is.

But how is it that meanings can be made from forms never before encountered? When we pick up a book, listen to a piece of music, observe another's behavior, that particular book, that particular piece of music, that particular behavior, has never before been encountered. The particular array we confront has a unique configuration. We cannot explain our ability to construct meaning from events that are new entirely on the basis of previously learned responses. While the use of repertoires of learned behaviors certainly contributes to the recovery or creation of meaning, something more must be added. The something more, I wish to claim, resides in man's ability to build a world beyond the stimuli provided, to go beyond the information given, to use his imaginative capacity to construct pattern, to perceive implied meaning, to read between the lines, in short, to break free from the discrete, digital character of each separate stimulus in order to form wholes, patterns which carry meaning to consciousness.

The ability to go beyond the information given, to piece together what is discrete and separate, requires both an inclination and an ability to treat materials or ideas flexibly, to be able and willing to play with the stimuli one confronts so they can be patterned. The early forms of play of the young are precisely aimed at exploration, the seeking of possibility, and culminate in the discovery of patterns that hold meaning.* Such behavior, formed in the context of play, provides the ground for meaningful forms of reading. Through play, imagination is exercised and combinatorial forms of exploration occur. New relationships are sought and new patterns established. These patterns, first discovered through play, eventually become formed into the codes necessary for games. Games, unlike the pure forms of play, are rule-governed activities that possess the

*I have learned much about the functions of play in childhood from Professor Brian Sutton-Smith of Teachers College, Columbia University.

codes that establish conventions for social forms of interaction. The acquisition of these codes or rules provides a form of learning that children use as a basis for learning the codes used in reading.

The codes that are used in reading, in the conventional sense of the term "reading," are referred to as syntax. But syntax is not limited to the written word. The arts, for example, possess what might be called "qualitative syntax."[1] Qualitative syntax is the form within which a particular work is created. Abstract expressionism, surrealism, cubism, romanticism, and classicism exemplify the construction of different syntaxes in the arts. We call these syntaxes or codes in the arts "style." Each has its own logic, and each logic must be understood if the form is to be meaningfully read.

The ability to exercise imagination in reading is not, in my view, a marginal characteristic of the process; it is a necessary condition for its occurrence. Unless children can free themselves from the particulars of each stimulus, the patterns that are necessary for meaningful reading will not occur. Young children may learn to call individual words but will not recover the sense imbedded in these words unless they can construct the relevant patterns.

I emphasize this aspect of the reading process, because the inclination to play and to "fill in" through the use of imagination are dispositions and abilities that school climates can foster or stifle. Play, like other forms of human behavior, is largely learned. While all children play, the ways in which they play differ, and the degree to which their play draws upon imagination varies. Both the generic process of reading and the particular process of reading from books might be more effectively fostered by providing an environment that encourages the child to strengthen his imaginative capacities than one that does not. The mechanization of reading skills, unassisted by the human imagination, will, I believe, create mechanical readers whose ability to perceive nuance, to appreciate analogy, to penetrate metaphor, and to understand implication, will be seriously limited. Put another way, the development of higher order systems, such as a sense of humor and the ability to deliteralize perception are necessary conditions for the creation of meaning through reading.

Although the exercise of imagination is a necessary condition for the creation of meaning through reading, reading requires more than the use of imagination. It requires an understanding of the code and the context in which the material to be read participates. As I alluded to earlier, the expressive forms that man creates are coded forms. These codes, initially

the invention of individuals, become socialized and are eventually culturally disseminated. In short, the codes become shared and public. To read well, whether it be words or pictures, foods or dances, requires one to understand the nature of these codes, the parameters they possess, and the intentions that they seek to realize. For example, published material in the natural sciences participates in a set of codes defined by the discipline. This discipline is a form of social institution. At some point variables must be operationalized, replicability of the experiment must be possible, and the hypothesis must be testable, at least in principle if not in fact. To read published material in the natural sciences requires an understanding of these codes so that the validity of the conclusions can be tested against them. What it means to be able to read such material is not only to be able to imaginatively fill in what is and what is not said, it also requires one to understand the code and context of which the material is a part.

The reading of history requires knowledge of other codes. Historians have different conventions from those of natural scientists. These conventions define historical acceptability. Evidence in historical writing can have structural corroboration; primary and secondary sources provide different degrees of validation to historical interpretation. Reading history meaningfully presupposes an understanding of what is tolerable and what is not within the parameters of the historical style within which the historian works.

The need to understand the codes used in the creation of expressive forms is perhaps no better illustrated than in the field of modern art. All of us bring to works of art certain expectations defined by the codes we have learned to use. We encounter modern painting, for example, with a repertoire of such codes and try to use them to understand or experience the work. But quite often the codes we are able to use are not useful for unlocking the meaning embedded in the work. We sometimes bring to the work an inappropriate set of expectations; we don't know what the artist was after; we don't quite understand what to look for, and as a result we fail to find meaning in it. As a result, we leave the work with a sense of emptiness, with disappointment. We have been unable to make sense of it.

The reason for our inability to recover meanings from such expressive forms as works of modern art is not because we are unintelligent, but because we are ignorant. We have not learned to read the syntax the artist has used. When this syntax is understood, we are able to put to the work the appropriate questions. We cease expecting the messages of Matisse to be the same as those of Massachio.

Basically the same conditions hold for reading prose and for reading poetry, for reading Tennessee Williams as compared to reading Pirandello, for reading Poe as compared to reading cummings. Comprehension of these codes or syntaxes, both within and between disciplines, is a crucial condition for the creation of meaning through reading. But these are not the only conditions. Different forms of written expression draw upon different knowledge systems to be effectively understood. Take, for example, the following passage:

> *Spring promises everyone happiness—and tenfold to the prisoner. Oh, April sky! It didn't matter that I was in prison. Evidently, they were not going to shoot me. And in the end I would become wiser here. I would come to understand many things here, Heaven! I would correct my mistakes yet, O Heaven, not for them but for you, Heaven! I had come to understand those mistakes here, and I would correct them!*
>
> *As if from a pit, from the far-off lower reaches, from Dzerzhinsky Square, the hoarse earthly singing of the automobile horns rose to us in a constant refrain. To those who were dashing along to the tune of those honkings, they seemed the trumpets of creation, but from here their insignificance was very clear.*
>
> *The walk in the fresh air lasted only twenty minutes, but how much there was about it to concern oneself with; how much one had to accomplish while it lasted.*
>
> *In the first place, it was very interesting to try to figure out the layout of the entire prison while they were taking you there and back, and to calculate where those tiny hanging courtyards were, so that at some later date, out in freedom, one could walk along the square and spot their location. We made many turns on the way there, and I invented the following system: Starting from the cell itself, I would count every turn to the right as plus one, and every turn to the left as minus one. And, no matter how quickly they made us turn, the idea was not to try to picture it hastily to oneself, but to count up the total. If, in addition, through some staircase window, you could catch a glimpse of the backs of the Lubyanks water nymphs, half-reclining against the pillared turret which hovered over the square itself, and you could remember the exact point in your count when this happened, then back in the cell you could orient yourself and figure out what your own window looked out on.*[2]

To understand this passage from Aleksandr Solzhenitsyn's *The Gulag Archipelago* requires the use of a knowledge system that recalls the promise

of spring, the sense of growing life, the flowering vitality that the April sky once generated in the human soul. No exclusively linguistic conception of spring, or April, or sky will do. The ideas of which Solzhenitsyn speaks are qualitative through and through, and to understand his work requires knowledge of the qualities to which his own literary language refers. *The Gulag,* like other forms of literature, depends upon remembrances of things past in forms that analytic philosophy does not. In the literary arts, as in the other arts, there is a magical interaction between the use of the qualitative past and the power of the expressive form itself to engender a particular quality of experience. That is, the form of the expressive form itself engenders much—but not all—of the feeling of the experience.

I believe the point here is important for understanding how we come to understand through reading. Each of us, in varying degrees, possesses knowledge in different knowledge systems. Understanding different forms of writing depends upon the extent to which what we know in these systems is relevant to the material that we are reading. But in addition, the form of the written form itself provides a phenomenon to be experienced. Thus, there occurs an interaction between linguistically conceptual and qualitatively conceptual material. Out of this interaction meaning from reading is born.

It is ironic that although these aspects of the reading process are so important, they are so generally neglected in the schools. Elementary school reading programs seldom provide adequate attention to content specific coding systems, and teachers of particular subject areas in secondary schools seldom address themselves or their students' attention to the disciplinary logic of the material students read. All too often, this logic is eviscerated from the textbooks themselves. Thus, the third point I wish to make is that reading, whether it be that of human behavior, modern painting, physics, history, or poetry, requires not only the ability to exercise the imagination, it also requires a knowledge of the codes and context within which the particular material to be read participates.

Let me now turn my attention to "reading" — the type of reading with which most of you are concerned, the kind of reading that occurs when one deals with those expressive forms found on the printed page. In this form of human expression three aspects of the process seem to me to be worth highlighting. I will call these aspects the *strategic,* the *substantive,* and the *qualitative.* They correspond respectively to the following questions: What is it the author is doing? What is it that the author is saying? And how is the author saying it? Let's take each in its turn.

he structures his expression. This form of reading requires a type of second order attention beyond what is being said; it requires the ability to perceive the architecture of argument.

The reason the strategic aspect of reading is important is because it enhances the meanings we are capable of creating. With such meanings we are in an advantageous position to see a quality of form that we otherwise would not, and we are in a position to understand what the author is doing to persuade. Let me give you a brief example. It comes from Aristotle's *Physics*. In Book II of *Physics* Aristotle writes:

> *Of things that exist, some exist by nature, some from other causes.*
>
> *'By nature' the animals and their parts exist, and the plants and the simple bodies (earth, fire, air, water)—for we say that these and the like exist 'by nature'.*
>
> *All the things mentioned present a feature in which they differ from things which are not constituted by nature. Each of them has within itself a principle of motion and of stationariness (in respect of place, or of growth and decrease, or by way of alteration). On the other hand, a bed and a coat and anything else of that sort, when receiving these designations—i.e., in so far as they are products of art—have no innate impulse to change. But in so far as they happen to be composed of stone or of earth or of a mixture of the two, they do have such an impulse, and just to that extent—which seems to indicate that nature is a source or cause of being moved and of being at rest in that to which it belongs primarily, in virtue of itself and not in virtue of a concomitant attribute.*[3]

What Aristotle is *doing* is different from what Aristotle is *saying*. What Aristotle is doing is dividing the world into two parts. In one part are those things caused by nature and in the other those caused by art. He then divides the world even further. Thus, like a nest of Chinese boxes, Aristotle makes distinctions that he will later use to classify the furniture of the world. To understand what Aristotle does, one must use what he says to learn about what he does. One must look to the strategies of argument and not just to the content of expression.

My claim here is that all forms of expression have a strategic aspect. Learning to read the strategy of expression I believe to be a neglected, but important aspect of the process of reading.

The substantive aspect of reading deals with the ability to critically appraise the content of expression. Is what the author is saying true, is it

good, is it beautiful? Some statements are more beautiful than true, some truer than good, and some more good than beautiful. But to know which of these ideals to apply, one must know the field in which the material resides; poetic truth and the truth of mathematical proposition are not the same. Beauty in one is not identical to beauty in the other. To understand the substantive aspect of reading, one must know the syntax which it uses and the context in which it is created. Without such knowledge reading at best is shallow and at worst leads to a misconception of the reality that the author has attempted to shape.

The qualitative aspect of reading focuses upon *how* the author uses language to form the content of his expression. Language, whether verbal or written, is a formed entity. I spoke earlier of the structure, architecture, or as I called it, the strategy of argument. The qualitative participates in that strategy as well. But it also emerges in the ways in which words are chosen, connotation suggested, and phrases organized. The forming of these words, connotations, and phrases determines the expressive quality of the language itself. It is these forms, forms that have no discursive equivalent, that create the coherence, tempo, and emotional tone of the written material. There is no better way to illustrate this quality than to compare two letters, one written by Abraham Lincoln, the other by Kaiser Wilhelm. In 1864, shortly before the end of the Civil War, Lincoln wrote a letter to Mrs. Lydia Bixby, a mother who, he had learned, lost five sons in battle. Lincoln wrote to her as follows:

Dear Madam,

I have been shown in the files of the War Department a statement of the Adjutant General of Massachusetts that you are the mother of five sons who have died gloriously in the field of battle. I feel how weak and fruitless must be any word of mine which should attempt to beguile you from the grief of a loss so overwhelming. But I cannot refrain from tendering you the consolation that may be found in the thanks of the republic they died to save. I pray that our Heavenly Father may assuage the anguish of your bereavement, and leave you only the cherished memory of the loved and lost, and the solemn pride that must be yours to have laid so costly a sacrifice upon the altar of freedom.[4]

This is what Lincoln wrote. The Kaiser wrote as follows:

His Majesty the Kaiser hears that you have sacrificed nine sons in the defense of the Fatherland in the present war. His Majesty is immensely gratified at the

fact, and in recognition is pleased to send you his photograph with frame and autograph signature.[5]

What is clear in this comparison is the fact that the shape of the language in Lincoln's letter itself creates a stately, reverent presence that is absent in the quality of the latter. Both letters have qualitative aspects, but it is the qualities of the former that we prize, not the latter.

If students are to create meaning through reading, the qualitative aspect of the process must not be neglected, since an inability to perceive the qualitative character of expressive forms diminishes significantly what students can experience within the message itself.

The qualitative aspect of reading deals not only with the shape of content, to use Ben Shahn's phrase, it also deals with the ability to penetrate the meanings of metaphor. This is effectively exemplified in the poetry of e. e. cummings. Let me read you one of his poems:

you shall above all things be glad and young.
For if you're young, whatever life you wear
it will become you; and if you are glad
whatever's living will yourself become.
Girlboys may nothing more than boygirls need;
i can entirely her only love
whose any mystery makes every man's
flesh put space on; and his mind take off time
that you should ever think, may god forbid
and (in his mercy) your true lover space:
for that way knowledge lies, the foetal grave
called progress, and negation's dead undoom.
I'd rather learn from one bird how to sing
than teach ten thousand stars how not to dance[6]

Now take the last couplet in that poem,

I'd rather learn from one bird how to sing than teach ten thousand stars how not to dance.

To penetrate the meaning of that couplet, to grasp the allusions it contains, requires one to free oneself from literal perceptions of meaning and

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to flow into the import of the images in the poetry itself. Although these images are not literally translatable, there are some things we can say about them.

Learning is a humble thing compared to teaching. To teach puts one in a superior position, to learn in the position of a subordinate. Learners are seldom philanthropists. But who would the poet rather learn from; not Einstein, or Marx, or Darwin; not the greatest of the greats, but from a bird, the most fragile of the fragile. And what would he rather learn; to understand the universe, to be able to turn dross into gold, to be able to create atomic fission? No. He'd rather learn to sing. He'd rather learn to do something that gives joy to life from one of the most fragile of God's creatures than to teach the largest bodies of our universe itself how not to dance.

But who teaches stars not to dance? How does one teach stars not to do something? Astronomers do. Astronomers teach us that stars do not dance. What we see are simply the lights that flash as they traverse the atmosphere. Cummings chooses joy over knowledge. But to know that, no literal reading will do. An ability to allow one's imagination to grasp and play with the qualitative aspects of cummings' impression is a necessary condition for recovering the meaning the poet has created.

The final point I wish to make in this paper deals with the social and educational conditions that are now bearing upon the schools and that influence what we think we should be doing as teachers. I have tried in my remarks to convince you that reading is not only a generic human activity designed to meet man's biological need to know, but that it is an artistic activity as well. It is an activity concerned with the creation of meaning through the creation of form. Writers, painters, architects, and cooks, each in the modes within which they work, create such forms. Readers of these forms in turn create meaning from them. In both situations artistic formation is necessary. Given this view of reading, a view which recognizes its dependency upon the imaginative use of codes, content, and context, we need to guard against forces that would seek to reduce this rich human process to one of empty mechanization. Reading is not simply a function of acquiring what we call "reading skills." I am not arguing against such skills. Every artist needs them. But no art is born of skills alone. No art is simply a creature of recipes and procedures. There must be a unique human contribution, a synthesis of past and present, an interaction of all of the knowledge systems we have that are appropriate to the expressive form we attempt to read. I am concerned that in our desire

to drill in early reading skills, we may be stamping out the very imaginative inclinations that make reading possible. The replacement of the dress-up corner with a book shelf in the kindergarten might not be in the best interests of our children's ability to read. In short, I am concerned that through piecemeal approaches to tasks depending upon extrinsic forms of rewards, we mechanize what needs to be an organic, flexible, imaginative, artistic process.

I am also concerned that similar forces, forces which appear in ill-conceived conceptions of educational accountability, press too hard on teachers and therefore upon children to demonstrate effectiveness on tasks that have little relationship to the love of reading itself. When teachers attempt to operationalize their goals through measured behavior and tell children that three books must be read for an A, two for a B, or that one book of 300 pages counts as the equivalent of three books for an A, they are surely developing and using objective, quantitative, empirical measures of "achievement." Just as surely, they are creating a climate that teaches children that what is important is not the rewards that come from the creation of meaning through reading, but from a payoff system that has nothing to do with what reading is for. Although such systems can bring about the behavior desired, I cannot help but wonder about the quality of the experience that it engenders. We must learn to look behind behavior into the quality of life that schooling creates for the young in order to know whether the programs we provide are educational.

I am concerned, too, that extreme conceptions of individualization have desocialized the reading process. Reading can be the basis for recovering the lost art of conversation. It can provide grounds for debate, speculation, the comparison of alternative interpretations of meaning. Reading does not have to be a race through a box of color-coded reading skills. There were times when families read together and then discussed what they read. Poetry, short stories, political editorials, a sense of community affiliation, and of belonging and being were heightened by shared participation in a common event. I am concerned that in our effort to give each student what he needs, we use processes that foster competition and which isolate him from the sense of community and shared experience that all of us need.

Thus my larger concerns stem from what I believe to be a growing mechanization of schooling and in the process a reduction of education to training. I would like to conclude my remarks by reading you a story. It's one written by Isaac Asimov, a modern writer of science fiction. Its title is,

"The Fun They Had."[7]

Margie even wrote about it that night in her diary. On the page headed May 17, 2157, she wrote, 'Today Tommy found a real book!'

It was a very old book. Margie's grandfather once said that when he was a little boy his grandfather told him that there was a time when all stories were printed on paper.

They turned the pages, which were yellow and crinkly, and it was awfully funny to read words that stood still instead of moving the way they were supposed to—on a screen, you know. And then, when they turned back to the page before it, it had the same words on it that it had when they read it for the first time.

'Gee,' said Tommy, 'what a waste. When you're through with the book, you just throw it away, I guess. Our television screen must have had a million books on it and it's good for plenty more. I wouldn't throw it away.'

'Same as mine,' said Margie. She was eleven and hadn't seen as many textbooks as Tommy had. He was thirteen.

She said, 'Where did you find it?'

'In my house.' He pointed without looking, because he was busy reading. 'In the attic.'

What's it about?'

'School.'

Margie was scornful. 'School? What's there to write about school? I hate school.'

Margie always hated school, but now she hated it more than ever. The mechanical teacher had been giving her test after test in geography and she had been doing worse and worse until her mother had shaken her head sorrowfully and sent for the County Inspector.

He was a round little man with a red face and a whole box of tools with dials and wires. He smiled at Margie and gave her an apple, then took the teacher apart. Margie had hoped he wouldn't know how to put it together again, but he knew how all right, and after an hour or so, there it was again, large and black and ugly, with a big screen on which all the lessons were shown and the questions were asked. That wasn't so bad. The part Margie hated most was the slot where she had to put homework and test papers. She always had to write them out in a punch code they made her learn when she

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was six years old, and the mechanical teacher calculated the mark in no time.

The Inspector had smiled after he was finished and patted Margie's head. He said to her mother, 'It's not the little girl's fault, Mrs. Jones. I think the geography sector was geared a little too quick. Those things happen sometimes. I've slowed it up to an average ten-year level. Actually, the over-all pattern of her progress is quite satisfactory.' And he patted Margie's head again.

Margie was disappointed. She had been hoping they would take the teacher away altogether. They had once taken Tommy's teacher away for nearly a month because the history sector had blanked out completely.

So she said to Tommy, 'Why would anyone write about school?'

Tommy looked at her with very superior eyes. 'Because it's not our kind of school, stupid. This is the old kind of school that they had hundreds and hundreds of years ago.' He added loftily, pronouncing the word carefully, 'Centuries ago.'

Margie was hurt. 'Well, I don't know what kind of school they had all that time ago.' She read the book over his shoulder for a while, then said, 'Anyway, they had a teacher.'

'Sure they had a teacher, but it wasn't a regular teacher. It was a man.'

'A man? How could a man be a teacher?'

'Well, he just told the boys and girls things and gave them homework and asked them questions.'

'A man isn't smart enough.'

'Sure he is. My father knows as much as my teacher.'

'He can't. A man can't know as much as a teacher!'

'He knows almost as much, I betcha.'

Margie wasn't prepared to dispute that. She said, 'I wouldn't want a strange man in my house to teach me.'

Tommy screamed with laughter. 'You don't know much, Margie. The teachers didn't live in the house. They had a special building and all the kids went there.'

'And all the kids learned the same thing?'

'Sure, if they were the same age.'

'But my mother says a teacher has to be adjusted to fit the mind of each boy and girl it teaches and that each kid has to be taught differently.'

'Just the same they didn't do it that way then. If you don't like it, you don't have to read the book.'

'I didn't say I didn't like it,' Margie said quickly. She wanted to read about those funny schools.

They weren't even half-finished when Margie's mother called, 'Margie! School!'

Margie looked up. 'Not yet, Mamma.'

"Now!" said Mrs. Jones. 'And it's probably time for Tommy, too.'

Margie said to Tommy, 'Can I read the book some more with you after school?'

'Maybe,' he said nonchalantly. He walked away whistling, the dusty old book tucked beneath his arm.

Margie went into the schoolroom. It was right next to her bedroom, and the mechanical teacher was on and waiting for her. It was always on at the same time every day except Saturday and Sunday, because her mother said little girls learned better if they learned at regular hours.

The screen was lit up, and it said: 'Today's arithmetic lesson is on the addition of proper fractions. Please insert yesterday's homework in the proper slot.'

Margie did so with a sigh. She was thinking about the old schools they had when her grandfather's grandfather was a little boy. All the kids from the whole neighborhood came, laughing and shouting in the schoolyard, sitting together in the same schoolroom, going home together at the end of the day. They learned the same things, so they could help one another on the homework and talk about it.

And the teachers were people. . . .

The mechanical teacher was flashing on the screen: 'When we add the fractions ½ and ¼—'

Margie was thinking about how the kids must have loved it in the old days. She was thinking about the fun they had.

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Reading for Non-Literal Meaning

GABRIELE LUSSER RICO

A mind that is very sensitive to forms as such and is aware of them beyond the common sense requirement for . . . classification of things is apt to use its images metaphorically, to exploit their possible significance for conception of remote or intangible ideas.

Susanne Langer

READING AT ITS most fundamental is a constructive act of the imagination, for meaning can only emerge with our perception of patterns. The reconstruction of such meaningful patterns performs two basic functions: one is to acquire literal meaning; another is to achieve non-literal meaning. We read a newspaper column or a repair manual to determine who, what, when, where, and how. But we are also daily confronted with more subtle forms to be read: an ironic statement, a cartoon, an epigram, a poem, whose import we miss or reject if we cannot go beyond the literal.

Reading in the conventional use of the term deals with decoding material that exists in space and time. The first set that people employ in reading is to attempt to understand the content of what the language expresses. But writers not only present a content, they also present a strategy through which content unfolds. This strategy forms the structure of their expression. It defines the course of argument, the shape of poetic statement, and the composition of narrative. These structures or strategies set up a tempo and lead the reader into the work. But to recognize the strategies writers employ requires that one rise above the content in order to see, not simply what the author is saying, but what the author is *doing* as

But reading for non-literal meaning is not merely an extension of the literal: I will argue that reading for non-literal meaning requires a strategy different from reading for literal meaning; that is, the strategy required to read a repair manual is different from that required to read a work of art, be it poem, painting, or novel. Whereas reading the former necessitates a linear progression from part to whole, reading the latter necessitates an initial sense of configuration, a global apprehension of a complex field, arrived at through the dominant impression of a totality.

Acquiring literal meaning is closely bound up with many of our present educational goals, essential goals indeed. But educators have tacitly assumed that reading for non-literal meaning will more or less result as a consequence of learning basic, literal reading skills. Yet, I have argued that reading for non-literal meaning presupposes the strategy of whole to part. I therefore suggest that this process not only constitutes a distinct and separate skill, but a skill as basic to our capability for interpreting our world as spelling or subtraction. As such, it deserves educational attention at all levels of schooling. Because the arts offer an extraordinary range of non-literal meaning, they play a significant role in enabling students to develop this skill.

This division of reading into two basic functions makes of reading a generic activity,* encompassing not only the printed word, but also visual forms, auditory patterns, and behavior, both implicit and explicit, as, for example, when we say, "I read you" to someone whose intention or attitude we think we have grasped. If literal reading is linear and successive, working from point to point along a chain of assertions, non-linear reading is configurational and qualitative, initially depending on clusters of dominant impressions.

Accordingly, I propose to develop the concept of *configurational strategy* necessary to achieve non-literal meaning, to support the basis for such strategy with empirical evidence from the findings of brain research, and to discuss and demonstrate the *clustering process* which focuses not so much on what to read as on how to read for non-literal meaning.

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*See Elliot W. Eisner's paper, this volume, for a discussion of reading as generic activity.

CONFIGURATIONS: APPREHENSION OF QUALITATIVE RELATIONSHIPS

What do I mean by "configuration"? Configuration refers to the holding of a complex whole in mind through an apprehension of qualitative relationships. Since apprehension of a configuration precedes the comprehension of details, it may be thought of as an advance organizer[1], the result of the multiple processing of qualitative connections which break down the tendency to isolate particular parts.

The word, configuration, comes from the combined form of the Latin con figura, *con* meaning "together," *figura* meaning "shape or trope"; trope in its turn comes from the Greek *tropos*, "to turn." Literally, then, a configuration is "a turning together," or, in more colloquial language, "a hanging together." A configuration is a perceived or created structure, physical, psychological, or symbolic, characterized by the qualities of wholeness, unity, belongingness. It is a Gestalt, form, shape, or structure we discover, permitting us to perceive our world and the things in it as coherent instead of as disconnected bits and pieces.

Let me restate that in reading configurationally, global apprehension of qualitative relationships precedes comprehension. If apprehension constitutes the global discernment of a configuration at the expense of detail, comprehension builds thereon through an exploration of the relationships among its elements. Apprehension is exclusively global while comprehension must be both global and focal, the result of an increasing—and an increasingly deliberate—dialectic between the configuration and its particulars. This is to say that the search for, and sense of, configuration, as crucial as I believe it to be for non-literal meaning, will remain global, skeletal, and ambiguous unless it is acted upon through a perception and articulation of the detail that will clarify and support it. In sum, the initial apprehension of a configuration only foreshadows the extent of one's potential involvement with it. Why, then, is it so critical to the reading process? Precisely because it stabilizes and energizes the reader's attention toward awareness of some fundamental context.

Configurational awareness presupposes awareness of qualities. Quality refers to the distinguishing characteristics, properties, or attributes of phenomena which the human mind abstracts from things and events. Qualities are, however, not fixed entities; rather, they often blend continuously and namelessly into one another. The word, sour, for example, is but a gross approximation of the degrees of sourness we encounter in pickles, lemon drops, unripe apples, not to mention human relationships

gone bad. Similarly, the identical acts and facts of the external world can produce different qualitative connections, a difference the writer Joan Didion attempts to express in the passage below:

> *. . . The point of my keeping a notebook has never been . . . to have an accurate factual record of what I have been doing or thinking . . . perhaps it never did snow in that August in Vermont; perhaps there never were flurries in the night wind, and maybe no one else felt the ground hardening and summer already dead even as we pretended to bask in it, but that was how it felt to me–and it might as well have snowed, could have snowed, did snow . . . How it felt to me: that is getting closer to the truth about a notebook . . .*[2]

And that is getting closer to the truth about qualities. Qualitatively, anything is potentially similar to anything else and thereby infinitely repatternable into new configurations of meaning. The perception of qualities necessitates the permeability of boundaries, for such aspects of experience as coldness, warmth, textures, smells, present literally boundless alternatives, depending on how they are connected by the mind. In turn, the perception of similar qualities in disparate things and events constitutes metaphor, a fundamental organizing principle of non-literal meaning.

THE ROLE OF METAPHOR

According to Webster, a metaphor is the use of a word or phrase literally denoting one kind of object or idea in place of another by way of suggesting a comparison between them. Such a definition does not do justice to the fundamental role of metaphor in man's apprehension, comprehension, and interpretation of his environment. Metaphor is more appropriately defined as a configuration of qualitative relationships abstracted from dissimilar phenomena. As such, metaphor is not merely the comparison of two dissimilar phenomena, but rather the result of abstracting *qualities perceived as similar* from dissimilar phenomena. The vehicle for the economical expression of qualitative insights, metaphor may be considered a fundamental organizing principle for non-literal meaning; it depends on combining into a new configuration qualities already met before in another configuration. Accordingly, it does not substitute for, but complements, expands on, and restructures meanings already established in other ways. Seen from this perspective, metaphor is not simply a

question of language any more than reading is simply a question of decoding written symbols.

Metaphor may also be considered the fundamental organizing principle of a work of art, for each work is a structure of qualitative relationships, a discerned and discernible configuration expressing non-literal meaning. All its elements are part of a continuous whole; its intentionality renders no detail arbitrary. Accordingly, any reader of a work who begins by pointing to a detail in an attempt to make sense of it cannot see the proverbial forest for the trees. If the reader cannot shift strategy to respond first of all to the configuration as a qualitative complex, it will be impossible for him to participate in its reconstruction for non-literal meaning.

Let me illustrate this inability to shift strategy with two responses to a painting—Paul Brach's "Riddle,"—reproduced in black and white below, followed by an effective strategy shift by yet a third reader.

"Riddle" by Paul Brach.
New York, Private Collection.

The first viewer examined the painting a moment, then commented: "Not much to that. I see a big circle in the middle and underneath are three little circles on a background of a sort of dull blue. I can't see any more than that. Tell me what it means, anyway." This reader's response shows no awareness of configuration; it begins with detail and ends with detail. Her strategy—demonstrating a focus on parts, is to identify and label the distinct features of the whole without any curiosity about possible relationships between them, without response to the painting as a configuration. Unable to let go of the focal, representational nature of the detail, this reader is unable to attend to the whole. Yet, literally speaking, what she has recognized is correct: there are indeed four circles, three small and one large. But without the willingness to bracket the whole, to separate it from ordinary experience, and to respond to it first as a totality, this viewer is unable to reach out toward non-literal meaning. The result: premature closure.

The second viewer's response was initially embarrassed hesitation, followed by: "What on earth are they? Circles? I can hardly see them. Everything here is almost the same color. Why did he even bother to paint it? Well, if you really want to know what I see, I see four circles, three little and one big, but there's one problem: they're all just about the same color as the background. (Pause) In fact, the big circle is only separated by a white line and the little circles are ringed with a dark line. That's how you can tell them from the background. (Pause) Funny, for some reason it makes me think of silence."

Although this viewer's last sentence indicates a shift toward a grasp of qualitative relationships, he stopped short. When the experimenter prodded by asking how the painting might be reminiscent of silence, he replied, "I don't know."

Unlike the first two viewers, the last, the critic Leo Steinberg, initially apprehends and responds to the whole by articulating a dominant impression:

> *They* [Brach's paintings] *are very near invisibility.*
>
> *Invisibility is of various kinds, and to list its varieties while the pictures are up helps to focus attention.*
>
> *Invisibility by disappearance. An object absent, remote or indistinct leaves a leftover emptiness and a straining to see . . .*
>
> *Then invisibility by extinction of light . . . a consistency or opacity that can be neither brightened nor deepened.*

And invisibility due to dimmed vision . . .

And there is one further mode of invisibility which comprehends the others. I mean the invisibility of an encompassing undifferentiated homogeneity. Obviously, where all differentiation is lacking, nothing will show.

And there, at the threshold of invisibility, your eye toils to see . . .[4]

Steinberg's strategy was to focus on the whole which in turn led to a dominant impression: "They are very near invisibility." (I interject here that Steinberg's admittedly dazzling facility with words is not at issue; what is at issue is the strategy whereby he reads a work of art, a strategy which can be employed with students to encourage reading for non-literal meaning). Having identified his dominant impression, Steinberg plays with and elaborates on it by exploring the qualities of "invisibility". Not until he has focused intensely on its qualities does he begin to move to the details of the painting in support of his dominant impression: "Color is gray-blue monochrome"; pigment is "dense"; a little umber lends "imperceptible warmth and weight"; circles are "ashen disks" or "hollows and portholes" or "dense massy globes," and so forth. Finally, only after skillfully drawing his reader from configuration into perception of detail and back into expanded configuration—expanded and qualified by his observations and interpretations of minute detail—does he risk a verbal expression of the metaphor he has perceived: The painting, he writes, is "the blueprint of a world-space in the space of a diagram," an expression of "oneness in multiplicity," a metaphor on which he subsequently elaborates.

His strategy is clearly traceable: apprehension of configuration; dominant impression of qualitative relationships; elaboration on these qualities; comprehension of non-literal meaning; articulation of non-literal meaning. Then, amazingly, almost as if to underscore the importance of non-literal strategy or, perhaps more accurately, as if to share his awareness that others might not come to the painting by the route he has taken, he cautions: "To see them (Brach's paintings) any other way . . ." is to see them merely as "blue pictures, blue surfaces plainly visible . . ."[5]

Steinberg's last statement illuminates the argument of this paper that the same object can indeed be read according to different strategies, depending on how we approach it, producing radically different perceptions and knowings. Evidence of brain research supports this view.

NEUROPHYSIOLOGIC EVIDENCE FOR LINEAR/CONFIGURATIONAL STRATEGIES

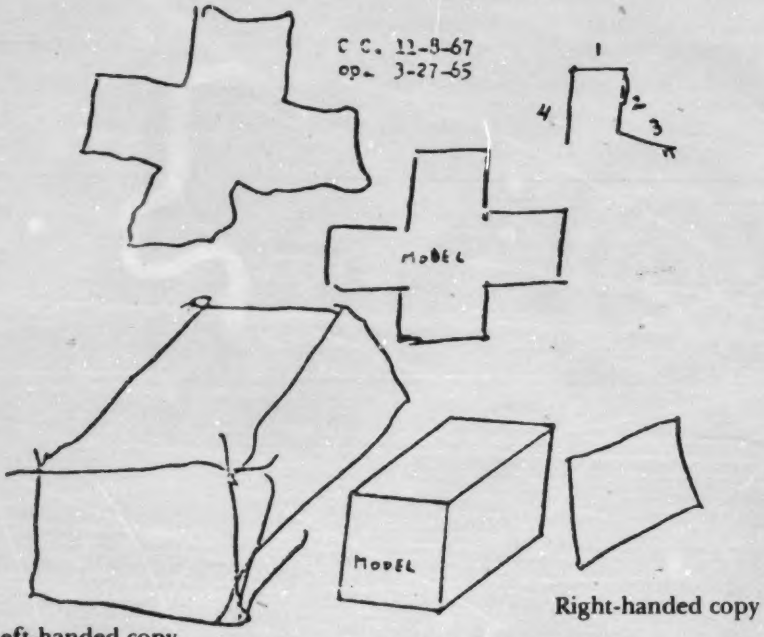
Brain research of the past twenty years is giving us a physical model providing substantive data that the two hemispheres of our brain have evolved asymmetrically, leading to dissimilar strategies for processing information. Such dissimilar strategies increase our cognitive options and result in the potential capability for complex symbolic activity. In highly compressed form, some of the distinctions relevant to the reading strategies delineated above are as follows:

The left hemisphere of right-handers is specialized for logical, analytic functions which are highly receptive to codified knowledge; these functions produce linear thinking in which meaning unfolds sequentially. The left hemisphere governs syntax and focuses on features independent of a context, such as circles as round shapes. By contrast, the right hemisphere of right-handers has a superior grasp of a unified field rather than of one feature at a time. It is adept at form, face, and pattern recognition: a face, for example, tends to be seen as a single configuration rather than as an assemblage of eyes, nose, moustache, and so forth. The resultant thinking is diffuse and synthetic, with meaning deriving from the multiple processing of stimuli.[6]

An individual with a diseased right hemisphere demonstrates an impaired semantic grasp of a whole as well as an insensitivity to nuances embedded in a text, such as connotation, irony, paradox. Asked to explain the Confucius epigram, "The proper man is not a dish," such a patient, unable to utilize right hemisphere strategies, would respond: "That's true; dishes are inanimate and men are animate; therefore, they're not alike." This literal processing of the epigram totally ignores the qualitative resemblances between dishes and men which constitute a rich and resonant metaphor—brittleness, hardness, shallowness, utility—all imply by extension what proper men are not: they are not shallow, rigid, or passive "things" to be used; rather they have depth, demonstrate flexibility, and are active agents responsible for shaping their own existence.

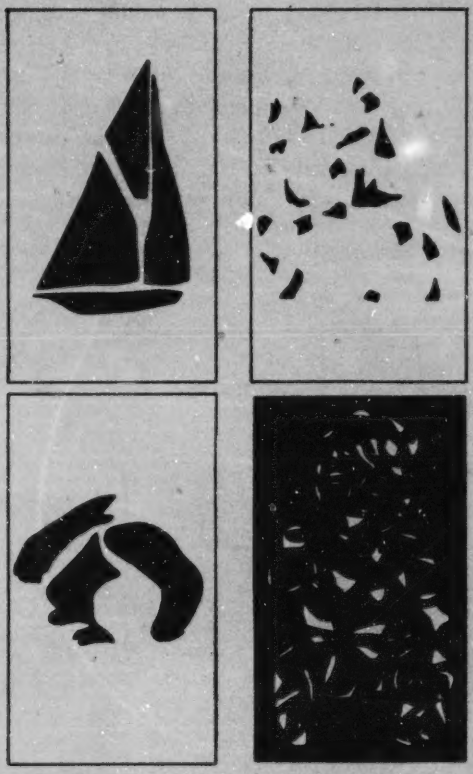
Furthermore, experiments with split-brain patients also attest to the configurational tendencies of the right. In these patients, the corpus collosum, the bundle of nerve fibers connecting the hemispheres, has been cut, leaving each hemisphere without access to the processing strategies of the other. The two models in the center below—a cross and a cube—were copies by a split-brain patient with both left and right hand. Keeping in mind that the left hemisphere governs the right hand and vice versa, the

drawing tasks show that the right hand was unable to reproduce the original model although he did attempt to draw—and even label—constituent parts. Unable to engage his right hemisphere capabilities, the patient's drawings of each configuration emerged grossly distorted, and the relations of parts were rendered totally askew. By contrast, the left hand was able to reproduce the whole and its relationships satisfactorily despite the fact that the patient was using the hand with which he would not ordinarily write or draw.



Drawing tasks by split-brain patients.[7]

Finally, it is the right hemisphere which, when exposed to only a small number of elements of a figure, is able to reconstruct the whole, a task which usually baffles the left since it tends to see only discrete pieces. The Street Figure-Completion Test items below are typical of such a task:



"Example of items used in the Street figure-completion test. Almost everyone recognizes the upper left, whereas only a few recognize the lower left; the other two are intermediate in difficulty." (From Bogen, DeZure, TenHouten, and Marsh, 1972:52).

Now, the question frequently asked about these research findings is, "So what? Why should it matter which hemisphere does what? After all, in most of us, the two hemispheres operate together since we don't walk around with split brains. What advantage is there is knowing that our brains operate via two strategies?" I believe it matters very much, particularly with respect to complex symbolic activities leading to non-literal meaning. Not only do the hemispheres complement, cooperate with, and inhibit each other, but they also respond to stimulation of their special

skills. In schooling, for example, we tend to teach for, test, and reward left hemisphere reading strategies whose chief purpose is the comprehension of propositional knowledge, the adherence to principles, and the derivation of orderly categories and conceptual systems by logical and denotative means. By contrast, we tend to ignore the reading strategies typified by the right whose chief function is to hold, juggle, and integrate simultaneous and incomplete input, to attend to the qualitative aspects of perception not easily categorized linguistically, and to grasp as wholes units of related experience instead of processing details first and then logically relating them.

The danger of dichotomizing, of course, is misleading oversimplification. I must emphasize that I do not wish to imply that successful reading for non-literal meaning is a unilateral process carried out exclusively by the right hemisphere. On the contrary, like most complex symbolic activity, reading is a bilateral process depending on our ability to synchronize the complementary functions of both hemispheres. But I do wish to claim that reading for non-literal meaning rests heavily on right hemisphere participation. In learning to read, it is the left which learns the rules, recognizes syntax, defines words or labels a color, responds to propositional statement, and neatly fits things and events and people into conceptual bins. But it is the right which constructs and responds to configurations before their features are known, processes qualitative information, and focuses on contexts rather than on the specific features of a stimulus. The inordinate emphasis of formal education on the strategies typical of the left hemisphere may well stifle students' ability to apprehend and deal meaningfully with novel configurations and thereby prevent them from participating in a wide range of reading which does not yield literal meaning.

Thus far I have argued that reading performs two basic functions: to acquire literal meaning and to achieve non-literal meaning. I have also argued that the configurational strategy, dependent on the perception and integration of qualities, makes reading for non-literal meaning possible. I have further stipulated that metaphor is not an ornamental linguistic device, but an organizing principle of qualitative relationships. Finally, I have drawn on some of the findings of brain research to substantiate my claim that the two functions of reading are dependent on different strategies, irrespective of the medium to be read. The foregoing suggests that the arts can contribute in a fundamental way to the teaching of reading for non-literal meaning.

READING A WORK OF ART: FOCUS ON CONFIGURATION

A work of art is a humanly constructed configuration which can be held fast for apprehension, inspection, and possible comprehension by other human beings. But comprehension results only through a process of intelligent reconstruction. The question is "How?" Susanne Langer has asserted, and rightly so, that literature is more widely taught and studied than any other art form precisely because it can be more readily treated as discourse with the consequence that

> *. . . its artistic character is more often avowed than really discerned and respected. The reason why literature is a standard academic pursuit lies in the very fact that one can treat it as something else than art. Since its normal material is language, and language is, after all, the medium of discourse, it is always possible to look at a literary work as an assertion of facts and opinions, that is, as a piece of discursive symbolism functioning in the usual communicative way . . .*[11]

Such an error is avoidable through reading configurationally, particularly in the initial stages of dealing with a work. This strategy, following the principle of economy in human knowing, prevents the confusion of overloading by beginning with a known—a dominant impression—and moving into the unknown as exploration progresses. Summarized, its salient features are as follows:

1. Configurational strategy begins with reading the whole before its parts, necessitating interaction with a continuous field. Initially, there is a sweeping apprehension of a whole, just as one first reads the expression of a whole face to determine whether to read it as friendly or angry. Such characteristics of art forms as motif, recurring image, balance, rhythm invite the reader's global response despite his lack of specific knowledge of how or even why the configuration "hangs together."

2. Configurational strategy acknowledges and explores a dominant impression. This quicksilver process is a Gestalt event and not logically determined. In reading a painting, for example, the response to the whole is the result of a series of rapid scanning movements in which the eye travels over the most compelling features to create a Gestalt. Though it may take only moments, such apprehension is sufficient to engender a dominant focus; the painting may be "cold," or "restless," or even "nearly invisible." This focus represents the core of subsequent exploration.

3. Configurational strategy synthesizes disparate qualities already

perceived and attended to in order to achieve coherence and completeness. Such a synthesis is the result of a dialectic between the initial sense of configuration and the emerging detail which shapes it. This synthesizing process may be thought of as the exploration of a tentative hypothesis, one undergoing continuous modification until confirmed or refuted.

CLUSTERING: SEARCH FOR CONFIGURATION

A process I call "clustering" capitalizes on configurational strategy. Clustering makes the process of moving from apprehension to comprehension visible. At once generative, non-linear, and visual, clustering enables the reader to participate in restructuring the web of relations which constitute any work of art. This deceptively simple process encourages 1) a loose structuring of responses, perceptions, and feelings, discouraging narrow adherence to linear, sequential thinking strategies and undermining the assumption of single-answer correctness so prevalent in the classroom; 2) a building on global responses; 3) an elaboration of dominant impressions as the reader searches out qualities, images, feelings around which the details will gain a sense of belongingness. Clustering not only acknowledges both the perplexity of a knower and the complexity of the reading experience, but leads to the achievement of non-literal meaning. I illustrate this technique and, by extension, configurational strategy, with the following poem:

from Heart's Needle
—W. D. Snodgrass

Here in the scuffled dust

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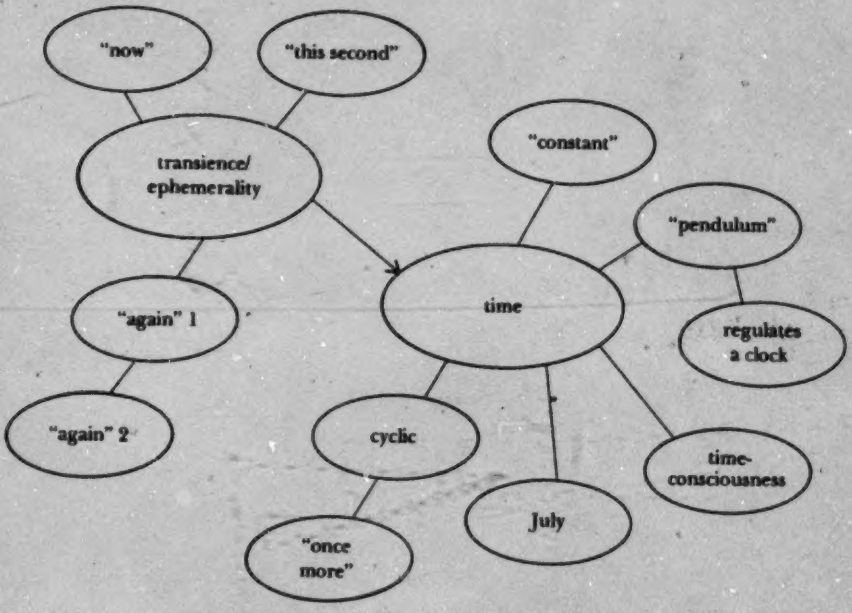
I hold you in my hands.[10]

How to begin? I respond to the whole, gather it up, so to speak. Something pleases me in these lines, though I don't yet know why or what. This sense of a whole as well as of pleasure, urges me to explore. Does the poem have a structure? What makes it "hang together"? Where do its dominant contours lie? What qualities determine its fabric and texture? What images recur? I read it again and acknowledge a dominant impression: I am struck by a sense of transience and ephemerality. But, where, I ask myself, does this sense manifest itself in the poem? I cluster, using "transience" as my focus:



Yes, time emerges as a dominant contour of this poem, giving rise to my sense of transience and ephemerality on the initial reading. I note in looking at my cluster that "pendulum," "this second," "now," "again," "once more," and "July" all are images of, or references to, time. They resonate with each other and strengthen my overall impression. But how is this contour of time which colors this poem like wine through water, relevant to the other elements of the poem? Time is marked by the swing of a pendulum. Is there a relationship there? Once more I cluster, with "swing" as focus:

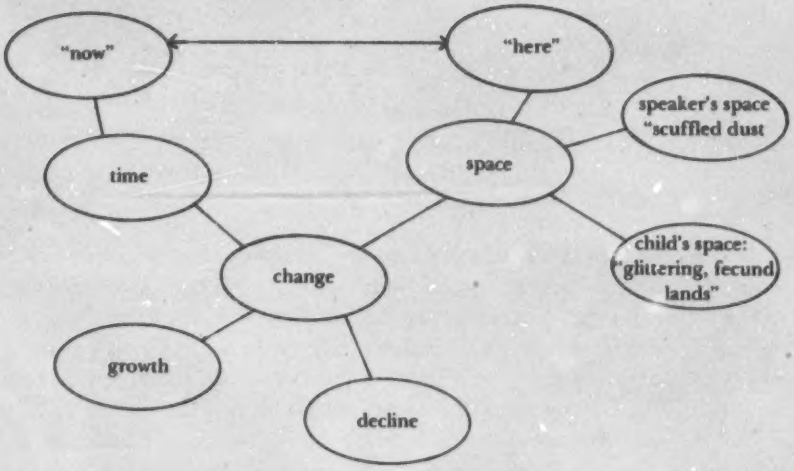
The rhythmic movement of the swing, like a pendulum, marks time. I don't know the word, "bob," so I look it up in the dictionary. I find it has a double sense, referring both to an up-and-down motion and to the weight hanging on a pendulum, reinforcing the regular and rhythmic temporal movement. The arc of time and the arc of the swing seem somehow to converge and resonate, one affecting the other. But how? My cluster indicates that swings are also reminiscent of childhood. I know childhood and swings go together; but I ask myself: Is childhood also ephemeral, time-bound? This question seems to strike a chord. I explore further, clustering a third time, with childhood as a focus to see what it will bring:

The multiplicity of childhood connections suggests the presence of a child. How? The playground, for one; the fact that the speaker—the I of the poem—must "lift" and must "push." Who seems to be this "I"? Perhaps a parent, for it is she/he who, by pushing, initiates the child's movement from total dependence to increasing independence. But the higher, farther, and longer the child flies into the blue July, the stronger it plummets back into the waiting hands of the parent. The speaker tells us that, like a "bad penny" or a "pendulum," the child always returns. How so? Children after all do grow up and leave their nests. If that is so, why the image of the return? This puzzlement leads me to ask: Are parents ever really free of their children? The return implies that, although the child may ultimately sever the economic ties necessary to the early years, the emotional ties are life-long and often ("bad penny!") a mixed blessing.

Yes, there is a child-parent relationship here. But how, I wonder, does this parent-child relationship connect to my strong initial sense of ephemerality? I glance at the cluster I have just constructed: The child keeps the parent's "constant time"; constant time suggests a relationship that is synchronized. In what way? Because it is synchronized, time inevitably must pass for both of them: Just as the pendulum regulates a clock, the child's growth marks the relentless passing of the speaker's life. This is the speaker's dilemma: if only the child would stop maturing, the speaker would stop aging.

What else suggests the speaker's acute sense of time passing? My cluster points to July. The use of "July" has rather obvious connotations of independence. But here, too, the meaning is multiple, for July is also just past the half-way point of the year. The child is half-grown like the "fat goldfinches" whose fatness indicates they have just been pushed out of the nest (which in the animal world means total severance and therefore total flight, not just pendular flight). But at the same time, from the speaker's frame of reference, July suggests that summer is the season which inevitably brings autumn—*his* autumn.

Time brings growth and decline—and change. I cluster again:

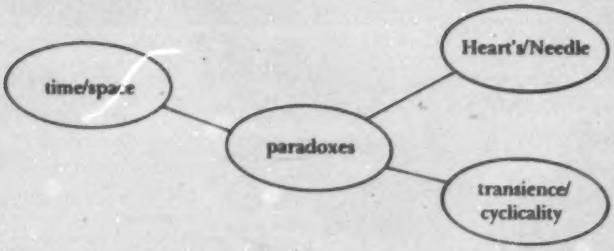


Time changes, the speaker's life changes, the child's life changes. There is also a shift in space: the speaker's space is the "scuffled dust," a reminder of his mortality. By contrast, the child's space is a giddy, vibrant, glittering, growing world—July is blue, goldfinches fly unencumbered, lands are fertile.

Yes, the details are beginning to mesh for me. I look again at my cluster and am struck by the meshing of space and time: "here" and "now." These two words which begin and end the poem place the speaker's awareness in the present moment, in the space of the playground, building to the last line: "once more now, this second" is as ephemeral as is the present space of childhood; "here in the scuffled dust" is as ephemeral as the passing summer.

And so the adult's consciousness of other spaces unknown to him, of other times somewhere in the uncertain future, generates in me awareness of the poignancy of "now, this second . . . " in the "here" of the playground.

But this strange, paradoxical unification of space/time attunes me to other paradoxes in the poem. I cluster again:



I note the paradox of ephemerality/cyclicality, as the cluster indicates: Life is ephemeral and youth is ephemeral; yet, on another level, the process is also cyclic. Where do I see this in the poem? Like a pendulum or a swing, the cycle doubles back upon itself, the forward swing initiating the backward swing just as surely as the child's growth indicates the aging in the adult. The process goes on repeating itself forever.

I also note the paradox of the title, "Heart's/Needle: an intensely visual image, the needle pierces the heart to bring pain; yet, just as a pin pricks, it also mends. The quality of love, it suggests, is tinged with both pleasure and pain, is tinged with the simultaneous need to cling and to push, is tinged with the simultaneous wish to dominate and to make independent. And so, the paradox of Heart's/Needle brings me back full circle to my initial sense of ephemerality and transience. How shall I sum up this poem for myself? Perhaps like this, among many possibilities: As time-bound creatures, we become intensely conscious of time's rhythms and the changes it brings, further intensified in close relationships, which are thereby pierced with the quality of pain.

CONCLUSIONS

The clustering of this poem began with a global, qualitative impression, moving the reader from the apprehension of the whole to its parts, then back to a more fully comprehended whole. This dialectic process brings large clusters of meaning to the surface, becoming refined and directed as exploration progresses. As each cluster is discovered, each dominant pattern of impressions is gradually connected to a larger whole, ultimately leading to non-literal meaning.

Clustering does not constitute instruction about works of art, about their various forms, or about their history. Such instruction reflects a different—if equally important—kind of learning. Rather, clustering generates a simultaneous downward, inward, and outward journey into a

unique configuration of someone else's making: downward into the poem, inward into the self, and outward toward new meanings in experience. We cannot be told to experience a configuration; we can only participate in its reconstruction.

I have claimed that reading for non-literal meaning, or learning to read configurationally, constitutes a basic skill generally overlooked in schooling, a complementary skill as fundamental to interpreting the word and the world as spelling and vocabulary study. Without this configurational skill, students will have difficulty moving beyond the common sense requirements for classifying the things of the world, to paraphrase Langer. Without this configurational skill the options for exploration, tranformation, or conception of ideas will be severely limited. Without this configurational skill, we will have difficulty ungluing a tendency toward rigid literalness with the consequence, as William Carlos Williams so tellingly perceived, that "the old will go on repeating itself with recurring deadliness."[12]

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What is Basic About Reading?

KENNETH S. GOODMAN

WHEN MY MIDDLE daughter was in kindergarten, she came home one day and announced that she had learned to draw a house. So I said "Okay, show me." She went to the chalk board in her room, and she drew a house. You know the house she drew: the box with a triangle on top and the rectangular chimney and the rectangular door. I said, "That's nice, can you draw another one?" And she did; and for about two years, that was the only house that Karen would draw. Was she getting instruction in the basics of house drawing?

There's a lesson there. The lesson is that we tend, in school, to build a technology of teaching and the curriculum, and we tend to regard that as if it were more basic than reality. We expand on it, vary it, elaborate on it, pull it apart, and so forth. And pretty soon what we're teaching is not art but the technology of how to draw a house. This also happens in reading. Among the 50 dissertation abstracts submitted to the committee of the

International Reading Association that chooses which is the best dissertation in reading each year, there is a dismaying preoccupation with instructional technology: which way is best to introduce letter sequence, letter-sound relationships, consonant blends. There are a few encouraging topics, but there's a depressing equation of the technology of instruction with learning to read and problems in developing literacy.

This pre-occupation with technology leads us, particularly in the field of literacy, to a pre-occupation with what some people think was successful past practice in the teaching of reading that worked in contrast to what we are doing now that doesn't work; a demand for some kind of reassertion of the good old ways and the good old days.

I'm going to attack this back to basics movement on two bases. One is the fundamental humanistic one that schools really exist for kids and not for a technology of learning. But I'll also attack it on the scientific basis that it simply is wrong: that that's not the way people learn to read. We wouldn't have anybody not learning to read, if all that was required was that somebody teach them a few letters and a few letter-sound combinations. "Back-to-basics" often is getting back to some kind of simplistic phonics system.

Recently I have had pass over my desk a circular from the University of Chicago Press advertising a program that they've published which, they assure us, is a marvelous new break-through in reading instruction. Actually it is one more systematized, sequential phonics program, and there isn't anything new about it at all. It isn't even new that it involves the technologizing "systems-approach" that grabs kids by the back of the neck and shakes them to make them learn to do the things that somebody has arbitrarily decided are necessary.

Another example was in a recent edition of the *Reading Teacher,* the elementary school journal of the International Reading Association. It was a full page ad by a particular publisher, but it wouldn't surprise me if any publisher had used it. Interestingly, it doesn't matter if it describes their program or not. Ads for school text programs frequently have little to do with what's in the program; what they reflect is what the sales department has decided are the things to say to sell the program. This ad says they are very proud, of the fact that they were the publishers of the McGuffey Reader because "We stuck to the basics with McGuffey's. Today 141 years later, we still stick to the basics." Their program "includes the link of supplementary materials that go right to work." It "concentrates on basic reading skills you (the teacher) and your kids can trust . . .

carefully sequenced phonics skills . . . structural skills . . . all right in the pupil's text. It provides entrance tests and objectives referenced placement tests and ditto masters and consumable, "no-nonsense" skills books. (Advertisement, American Book Co., *Reading Teacher*, 30:4, January 1977. p. 445).

The implication seems to be that entrance and placement tests, ditto masters, and skill books have been basic reading instruction for at least 141 years.

I believe what's basic in reading and reading instruction and kids learning to read has nothing to do with a particular method of teaching, good or bad. It has nothing to do with a sequence of skills or expensive technological materials packages. What it has to do with is that language is for the purpose of communication and if you're going to help somebody to become literate, that means helping them to be able to use written language to deal with meaning. So, in the case of reading, what's basic is getting meaning from print: interacting with the author through written language. In writing, what's basic is expressing meaning through written language.

In that sense, literacy is very much like oral language. There's a very unfortunate misconception that's current even among some linguistic circles that there's something less natural about written language than oral language. No respectable linguist would argue that you start to teach a kid to talk by saying phonemes at him and then teaching him to blend phonemes and then say syllables and then produce nonsense syllables and then produce words and then put the words together into one and two morpheme-words and then finally put them together to make sentences. But there are lots of linguists who are arguing that writing is something that you do *with* language rather than something that *is* language itself.

Linguists rejected, for good reasons, a pre-occupation with written language that had really prevented us from coming to understand how language basically worked as we neglected oral language. So they argued quite correctly that oral language is primary, that it's developed first by cultures and first by individuals. But individuals cut off from oral language such as the deaf have the same capacity to develop language and will reach out for visual language. But I also think study of written language is haunted by a disrespect for education as a profession, for educational research as a field and discipline, so that you get some psychologists, linguists, sociologists, who are quite good scholars and researchers, but who wander into reading and don't do their homework.

We have not always had the best application of scholarship and the best interdisciplinary interaction in reading programs. We get a strange kind of hook-up. On one hand, there is a kind of know-nothing group that says "What I want is that my kids get a good education, and good education is what I had when I was a kid, at least what I remember it was like; so let's go back to the good old stuff." On the other hand are the academicians, who are elitists anyway, and who, therefore, think that the reason that we haven't been successful in schools is that people who go into education aren't that bright, anyway. If they could do something else, they would. "Those that can, do; and those that can't, teach." I think that's even underscored in art education. If you're an art teacher, it must be that you couldn't be a successful artist. I don't believe that, I hope you understand; some of my best friends are . . .

What's basic, then, that we have to get back to is what we were trying to do in the first place: to teach literacy, and teach it in the reconceived sense of helping people to comprehend written language.

As we built a skill technology, we incorporated it into more and more elaborate tests. I was once asked by Oscar Boros to write some reviews for his *Mental Measurements Yearbooks.* He asked me to do that because I wrote a very negative review of *Reading Tests and Reviews,* which is all the *Mental Measurements Yearbook* stuff on reading pulled out into a separate volume. Boros, when he published the first *Mental Measurements Yearbook,* said that he hoped, by reviewing tests, to get good tests to replace bad tests. I was impressed by that original intention and then caught by his own introduction in which he said that most of the tests ever published—and this is particularly true in the field of reading—are still on the market. They still make money. Some of the oldest tests published are still selling.

The tests incorporate the technology. And one characteristic of tests is that no matter how inane they are when you give them to large groups of people, you get beautiful bell-shaped curves. You can always produce a group of people who are deficient in whatever it is the test tests. And if you're willing to accept the fact that that equates with the name on the test, then there are epidemics of children deficient in auditory discrimination or grammatical closure or reading comprehension. Suppose the State of California established a state funded program for children with Problem X. That would give each school district a vested interest in discovering among their school population, Problem X children. So they have to get a Problem X test to screen which kids are afflicted so they can then get the funding from the state. And suddenly, it seems that there has been an

epidemic in certain populations and Problem X has reached epidemic proportions among Chicano kids, and it really is a terrible critical thing among Black kids, though only moderate numbers of white middle class kids are afflicted (unless that's all a particular school has).

If you look at reading tests, they tend to focus very much on the skills, and those skills are impressively listed. It doesn't much matter that every time somebody has done a correlational study, they've discovered that there's so high a correlation between the various skill subtests of the reading test that they seem to be testing the same thing over and over again. But you can send to the publishers of the Stanford diagnostic test, and they'll send you back a computer print-out of all the skills that your kids need, according to the things that they missed on the particular test.

That creates an aura of technology that intimidates teachers. The teacher thinks, "I thought that kid could read; he just finished reading *Charlotte's Web*, and I saw him crying in that scene where it gets really touching, so I thought he understood. But according to that test he just took, he's deficient in getting the main idea, and blending C with R, so maybe I am wrong. The machines and computers and all those people with all the initials after their names who wrote those things must know more about it than I do."

We've developed a profession of people who have a vested interest in remediation and the treatment of all the problems that we've identified through the tests. I've been at meetings where colleagues have half-jokingly said, when we reported that according to our best information from our research, inner city kids read a lot better than standardized tests show they do, "We know that, but let's not tell the state legislature because then they won't give us any money for reading programs, and our jobs would be in jeopardy." The technology of reading has even cropped up in comic strips. A few years ago, Charlie Brown had a reading problem, and every day for two weeks, they explored a different possibility; one day he was dyslexic, the next day he had miopia, another possibility was minimal brain disfunction; it went on and on until one day Lucy said to him, "Charlie, have you thought about the fact that you just may be stupid?".

That's not an excuse either. We've known for a long time you rarely ever find a kid who is so retarded that he doesn't have language. Many mentally retarded kids learn to read easily and well without any particular difficulty. Maybe it's because we don't put as much pressure on them to learn. I've argued in print that you don't have to be smart to read, that there's no particular reason why it would require any more intelligence to

read than it does to listen and understand at a level where one can deal with the concepts. (Goodman, 1975).

We've moved so far away from the basic purpose of literacy instruction, that we have this terrible curricular syndrome: the kids that do satisfy the teachers that they're learning to read get a richer and richer curriculum; they get to do interesting things; they even have time for things like art and music. But we take the kid out of music to go to a remedial reading class. After all we have to take care of the basics. Then we start keeping him after school so he can get an extra dose of instruction with some teaching machines or with some para-professional tutors drilling him on things that he's already failed on in the regular school time. And then he gets to junior high school, and he starts a new remedial English and remedial reading program while the other kids are learning interesting social studies and science concepts and expanding their interests in art, dance, music, or drama. Instead of the kind of things that will begin to create interest, that will begin to create a relationship between what's read and some kind of purpose, relevant to the kids, the instruction gets more and more pre-occupied with the abstract technology of literacy. Even if readers develop some kind of functional literacy, they are convinced that they're a non-reader.

Carol Burke, who has worked in various ways with us for a long time, has been doing some work with adults and finds a very interesting syndrome. She'll say to an adult whom she's beginning to work with, "What can you read?" and he'll say, "Nothing". She says, "Well, do you take a newspaper? "and he says "Yeah". So she says "Well, are there any parts that are interesting to you? " Perhaps he says "Sports." So she gets the sports page, and she shows him a picture that has about a four-line caption under it, and she says "Tell me what that says," and he struggles and omits, and he substitutes, but when he finishes, she can then say, "Now, what was that about?" And usually the person can say, "Well, that's about the guy that was out trying to steal second base," So she then says "See, you can read." In one case this man said, "No, I can't," and she said, "But you just did," and he got very angry, and he said, "Lady, either you're putting me on, or you just don't know your business! I didn't know that word, and I didn't know that word and I couldn't handle that!"

His preoccupation is with thinking that somehow there are a set of magic buttons or formulas or things that readers do that he can't do that makes it possible for a reader never to have a problem, never to not know a word, always to know the next word. We've begun to call it the "next word

syndrome"; non-readers always believe that if you don't know a word that it's proof that you're a non-reader. Every time they come to a name or anything that's the least bit difficult, they take it as proof, and of course people have been telling them for a long time in their academic careers that they are non-readers.

Periodically we make a crisis out of the literacy problem. In Washington, D.C. they hired a new superintendent a few years ago and shackled him with a report written by an outstanding New York psychologist on the literacy crisis in Washington, D.C. Unfortunately that academic believed that the reason schools weren't succeeding was that they weren't trying hard enough; so the whole thing was built around, "How do you get the schools to try harder?" They were going to organize district committees and group committees and section committees and school committees, and they would promise that they would bring every child up to grade level by June of that year. That's a statistical impossibility: you can't make everybody average; average is the mean, and if you bring the low ones up, then the mean goes up; so you're chasing your own tail.

I wonder what would happen if we told the nation's doctors and medical researchers that they were going to be expected to cure cancer by next June 15, and that we would spend no federal money or state money on any research that didn't promise immediate solutions with no frills; none of this "funny stuff with the long names" research that doesn't really have immediate payoff. And we're going to bring in some people with quick cures and technological hardware like cancer curing machines. It sounds absurd to suggest it, but we keep doing it in the field of reading. We keep buying the quick cure, the hard sell, and the lavish promises; it makes it very difficult to deal with getting down to the basic issues of what literacy is all about.

I promised you I wasn't just going to deal with this on a humanistic basis, though I'm often accused of being a humanist, and I don't apologize for that. Sometimes when I'm introduced, I tell people I believed a lot of the things I'm talking about now before I had done any research, before I had read other people's research; I'm happy to report that science has supported my own prejudices.

Science and humanism come together because language is a personal, social, human invention. You can't deal with language without dealing with it as an aspect of both a social and a personal development of human beings. To try to understand language by studying porpoises or chimpanzees or bees, or any other kind of creature that has some kind of

communication, doesn't work; because they don't use language as the medium of thought, as the medium of learning, and for the kind of social interaction that's so vital for us as human beings. Human beings can't survive without language.

If you've ever seen a deaf child born into a hearing home cut off from language, you can feel the frustration and rage that he has because he has so much to communicate and such great difficulty doing it. The outstanding achievers among deaf kids are deaf kids who are lucky enough to be born into deaf homes, where there's visual language available to them almost from the beginning.

One of the ironies in language learning that we need to make a kind of key premise of curriculum development in language, is that when language is easy to learn, it's so easy that it seems almost unnecessary to teach it. And when we try to teach it and it's not easy to learn, it's almost impossible to do it. There are kids in New York City who are already able to speak two languages before they come to school. They can speak both to a considerable extent more than the tests show because the tests are constructed by people who often don't understand very much about language. And then they have difficulty becoming literate in either or both of the languages as we try to help them. What we need to say to ourselves is "Why is it hard?" "What is it about what we're doing that makes it hard?" It ought to be easy, because language under the right conditions is easy to learn.

What I'm arguing is something that it's taken us longer to come to in the field of language than it took people in the field of art. Maybe I'm venturing out beyond my depth, but it seems to me well recognized in art that function has to precede form. That's true in language, as well. Halliday (1976) has, in his recent writing, been focusing on this. He argues that children develop a series of models of language each of them relating to a function of language, for instance the function of "I want something." When the function is developed, then quickly the form of the language develops to accomplish that. He says they learn what language is because they know what language does. Put literacy into that context, and it isn't that reading and writing are harder to learn or less natural, but it's just that there are different set of circumstances, a different set of things that govern the functions of the language and that vary from culture to culture or subculture to subculture.

Why is it that when the state of Michigan published their scores every year in Michigan and they listed school districts in rank according to the

mean score in the 4th grade for that district, you could as easily have ranked the district according to the percentage of minority children in their population.

Dewey said a long time ago that you can't simply make a kid come to school; you've got to make the school come to the kid. We expect children to adjust to a rigid curriculum, a structured technology, and we simply shunt off those who don't meet the expectation. We should have learned after a couple of decades that equal education opportunity isn't really equal educational opportunity if it means that the schools are not flexible in dealing with what kids bring to school, what strengths they have. Equal opportunity has to imply the obligation to understand the learner and to build on that.

We have to ask ourselves in what sense written language is functional for a child or a group of kids. What does it really do for them? How does it work in their cultures? What evidence do we have that they've already become aware of the function of written language?

People often cite the invention of the printing press by Gutenburg as the thing that made mass literacy possible. I'd like to argue just the opposite of that. It was the need for the mass literacy that caused Gutenburg to invent the printing press, and if he hadn't done it, then somebody else would have. One of the reasons why we have the tremendous explosion of quick, cheap, easy reproducing devices today is because of the need society has for multiple copies of things, for large numbers of people to be able to read the same thing quickly right after it's produced. That's a social development.

Why is it that in China and Cuba mass literacy programs have been amazingly successful that have had virtually no money behind them, that in many cases have used archaic methodology or no methodology at all—just somebody with a book working with somebody who couldn't read. And yet in other situations, for instance in India, such campaigns are almost totally unsuccessful. I think one has to argue that it's the changes in the conditions of the culture and the society that make the people need to read and therefore be receptive to literacy. Without such changes, no amount of technology is going to help them. Simply speaking, we can't take our American reading technology to a developing nation and solve the literacy problem there by bringing them translations of our skill series and our skill hierarchies.

The Chicago school system is very proud that they have now a sequential list of 768 skills—and guess how many you have to go through to

get to meaning; how many skills does one have to check off; how many exercises do you have to do in those no-frills workbooks in order to be passed on to the point where it begins to make sense? I believe we ought to step aside, look at what we've learned about the acquisition of language, look at what we've learned about the development of literacy. Perhaps then we can see why some things work and some things don't, why some kids find it so hard and some kids find it easy.

I was at a conference on beginning reading at the University of Pittsburgh, and a very well-known educator reported that sometimes it takes 1,500 to 5,000 repetitions for a kid to learn a single reading skill. And I said to myself, "Hooray for the kid that has internal fortitude to resist learning something that he's made to do 5,000 times!" And how dense we are that we could sit with the kid over and over again and not get the message. There's something wrong; there's something irrelevant; there's something the kid is saying is disfunctional, doesn't fit, doesn't make sense.

I read recently in the *American Airlines Magazine* that this technologizing is coming to the humanities, too—this preoccupation with statistics and quantifying things. The article was talking about a couple of very successful companies that test new tunes for music publishers and producers by hooking up lie detectors to audiences and measuring the amounts of electrical activities on the skins as they listen to the tunes. That's supposed to be more reliable than asking the people if they like the song or not. Can't you see the corporate groups sitting there and being impressed by the statistical tables that they get with all that technical language; much more impressive than saying we asked 16 people and they thought the record was lousy.

One thing was kind of interesting. You always get into this with technology; it turns out that regardless of whether you liked it or not, rock tunes generate more skin electricity than ballads do just because of the volume of the noise. Think of what that could do with what we have to listen to all day; suppose somebody hadn't noticed that, and all the reports had gone in indicating that all rock tunes are liked better by all audiences. It could literally blow your mind.

Language and culture and thought and learning are all very much a part of what curriculum must build on for human beings. We have the basis for making literacy universal. But it turns out that it isn't a new sequence of skills; nobody has ever validated a hierarchy of skills anyway. What we really have to do is to get it all together. When you're reading, it

has to be because there's a message you need to get, and that has to relate to what you're interested in, what turns you on, and what gets you involved.

It can't be separated; you can't first learn the skills you need so then you can use them. Did it ever happen to you, at some point in your education, when you complained about all the grammar corrections on that paper that you'd poured your heart into, and you said "But Steinbeck writes that way," that the teacher said, "When you get to be Steinbeck you can write that way too, but at this time we'll use the rules."

Language development doesn't work that way. Writing is even more cut off from meaningful functional use than reading in school instruction. The things we ask kids to write are often never read for the purpose that they were written and often never written for a purpose that was self-generated by the writer. Can you think of how it would be if kids had to learn to talk in a situation where nobody ever listened or responded? Suppose people instead of answering their questions or giving them what they had asked for, told them what they had done wrong in the way they had said it. We do it with literacy all the time in school.

The kind of curriculum I'm arguing for must be rich and varied; it has to employ all the kinds of things we know a curriculum ought to have. There can't be any excuse that literacy is so important that it takes precedence over art or music or math or science or whatever. Language without content isn't language. Literacy skills don't exist in a meaningless vacuum.

I know a lot of people are concerned about the lack of the arts in the curriculum. But I see little social studies in the elementary curriculum. I see little science; maybe the teacher does an experiment once in a while, and lets the kids watch. Social studies just gets shoved off in the background as controversial, anyway; and art becomes an activity you have the kids do when they've finished the workbook. The teacher's not ready to go on to the next thing, so she gives them a crayon and a piece of paper, and they can draw. Of course, there are some kids who never get to do it because they never get done with the important things.

Even reading gets shunted aside for the sake of teaching reading. Isn't that strange? I was in a classroom once to see a student teacher. The kids were sitting at grouped tables, and in the middle of each of the groups of tables was a stack of trade books. I said to the teacher, isn't that great, the kids can just reach out and take a book. She said, "Yeah, but we're going to take them back to the library because the kids are supposed to read them after they finish their workbook pages, but they rush through

the workbooks so that they can get to the books, and they're not really concentrating on their work." So back go the books, and all day is spent teaching reading. But how much time is really spent reading? And how much of that time is spent reading something that they decided that they themselves wanted to read—that was something that had a message for them, that involved them, that was functional in some kind of sense for them?

Well-meaning attempts to play the devil's game are not an adequate response to the technologist and the systematizers who have the schools and curricula in technological straight jackets. It isn't a question of smuggling in a little art by having the kids take a letter or word and having them do some kind of creative thing around it. Or using dance to bend the body into funny shapes so you can represent all the letters of the alphabet. Or finding ways of stating in behavioral terms the objectives so that they can be tested, and somehow working in a few aesthetic ones which are going to get thrown out because they're not precisely enough defined and you can't provide five items to test each one that can be fed into the computer.

The game of trying to smuggle in something worthwhile or interesting or cultural, or relevant, or aesthetic, doesn't produce an acceptable curriculum, anyway; it winds up acquiesing to the notion that only basics are the true curriculum.

I think that we have to understand that human beings are whole and they learn language whole as they interact with each other. Literacy works the same way; it has to be part of all the other experiences that are going on.

I want to finish with something Sir Alec Clegg said at the National Council of Teachers of English this year.

He said when he was a small child, he would go to his aunt's house, and there was a motto on the wall burned into wood, something about "If you have two loaves of bread, sell one and with the money buy hyacinths." And he made the analogy that in school curricula we seem to fluctuate between bread and hyacinths. The bread is the basics: we've got to teach the kids the things they need; and the hyacinths is the rest of the curriculum. I don't quite agree with him. I think that somehow we've got to find a way of making bread out of hyacinths, or finding beauty in bread. The attempts to separate the basic from the rest not only short-changes the kids in terms of the fullness and richness of the curriculum, but it very much short-changes them in terms of the development of literacy, too.

On the Mysteries of Reading and Art: The Picturebook as Art Object

KENNETH MARANTZ

In pre-Biblical times, when one person wished to leave a message for another person he did not write it in words. These were primitive people. It was as much as they could do to draw a picture, and the effort often left them exhausted . . .

The ambiguous nature of pictographic messages often resulted in unnecessary violence, and it came as a great relief to everyone when writing was invented.

J. B. Handelsman[1]

AND THUS WAS CREATED the schism that commands our attention in this volume. Superficially the relationship between written language and art (pictures) would appear to be a matter of parallel symbol systems, each designed to provide a vehicle for communicating messages. Fortunately for those of us with academic curiosity, the matter is far from that simple.

What I intend to do in this essay is look at the two concepts (art and reading) in an attempt to discover what, if any, significant qualities of human experience they share. In this process I will at least touch on some concerns of language and semiology as well as the act of reading. My major focus, however, will be on the book as the potential object that both art and reading may attend to. I will argue for distinctions to be made among the body of books available and, in particular, for the special case of the picturebook as an object of art rather than a literary object. Finally I will draw some conclusions about the relationship between art and reading based on this analysis.

Although the book is but one of many containers for written language in our culture, it is the one that dominates the life of the school child, particularly in his early years as an incipient "reader." Primarily for this reason but also in an effort to simplify the structure of my exposition, I shall use the book as the exemplary model for all written messages. A book, basically, is a bound collection of pages which are usually imprinted with written language. But what is language, and what is the process by which it is made visible as writing? I can accept Saussure's definition that "language is a system of signs."[2] Of the several kinds of signs which man produces the one that seems germane to the study of written language is the arbitrary sign (often called a symbol). Where, for example, the icon relies on the similarity of appearances between the sign and the thing signified and the index refers to some kind of causal relationship, the arbitrary sign is bound by the conventions of the specific group using it and bears no physical clues that would suggest what it signifies. Words and phrases for the most part are such forms of conventionalized visual constructs.

The writing act is one which attempts to objectify meaning, i.e. to lay out markers that would lead others to discover the signified experiences of the writer. The process involves searching out appropriate arbitrary signs (words) and then organizing them linearly (in phrases) according to the linguistic rules of the culture. Simplemindedly, reading is the act which reverses this process: the reader looks at the lines of the signs and tries to identify signified experiences that match, i.e. that he comprehends from his own life's activities.

But, obviously, this neat image of a reversible equation is untenable. Words are symbols for non-linguistic qualities. We may, as per a dictionary, define a word using a set or sets of other symbols. But a "dictionary is a poor metaphor for a person's lexical knowledge . . . defi-

nitions, like some semantic theories, may provide plausible accounts of intentional relations between words, but their circularity is vicious. There is no escape from the round of words."[3] Thus, the reader can be quite certain that though he tries very hard, for the most part, his response to any written phrase must be idiosyncratic, i.e. he will generate rather than discover meaning. And the issue is further complicated when the words are set in their syntactical framework, and simple word-signs must integrate to become more complex phrase- and sentence-signs. In this setting "words don't have meanings. Words are able to do their work for us because they reside in structural linguistic patterns of distribution."[4]

From what I have claimed so far it should be evident that "Reading is not primarily a visual process. Two kinds of information are involved in reading, one that comes from in front of the eyeball, from the printed page, and that I call *visual information;* and one that derives from behind the eyeball, from the brain, that I call *nonvisual information.* Nonvisual information is what we already know about reading, about language, and about the world in general."[5] Indeed, reading is so complex an act that not only is there no standard theory to which scholars in the field subscribe, but at the practical level "There is continuing argument and disagreement as to the best methods of teaching children to read competently, and as to the difficulties they encounter in learning."[6] In recognition of this lack of agreement among experts it has been suggested that "any approach to reading instruction that worked before . . . is obviously still going to work . . . " This state of affairs leads to the intuitive approach as the best way to attend to the "unspoken intellectual demands of the child."[7] Or, as I have characterized the process, the massive groping for substantive knowledge contributes to the mystery of reading.

Art also moves in mysterious ways. Although many more centuries have been devoted to analyzing art than have been to intellectualizing reading, it too remains without a universally accepted definition. There are even those who would deny the possibility of such definition.[8] However, the lack of total agreement should not keep us tongue-tied because there are qualities of our visual experience which we can focus upon that may be useful if we are to explore relationships between reading and "art."

To begin with, reading is a process, and art, whatever else it may be, is not. Art, a noun, does not take kindly towards being made a verb. Rather what we have is an open-ended group of activities like painting, sculpturing, printmaking, etc. which collectively characterize the art making pro-

cess. For the purposes at hand we can limit ourselves to the two-dimensional processes which contribute to the making of books: the picture making activities.

If reading is that process which attempts to create meaning from written words, then what is the process which tries to gain meaning from pictures? It has been suggested "that print must be handled differently from pictures."[9] To the extent that pictures are icons, or at least to the extent that they may be exploited for their iconic possibilities, one mode of extracting meaning most commonly used with the young is that of naming. Pointing to a picture of a cat in a book, the attentive mother vocalizes "cat" or "kitty" for the benefit of her lap-seated youngster. The theory is that some salient visual characteristics of this inanimate picture will be perceived by the child as similar to those of the very active creature which often runs around the house. Without this teaching process, we are told, the ability to "see" the picture "as the cat" will not develop. For "there is no doubt that learning and adaptation do influence visual perception. Indeed, a part of the usual distinction between sensation and perception is that perception contains learned meanings and integration."[10] Most small four-legged creatures are called "cat" once that initial perceptual dawning has occurred; and as verbal reinforcement encourages correct matching and discourages mismatches, and as visual nuances begin to accompany the grosser, more generalized perceptions, the name eventually becomes triggered only by what our adult society accepts as "cat."

At somewhat later time the first grade teacher may use a similar approach, i.e. naming, when introducing the arbitrary sign "cat" to her class. In this instance, however, although she too wants the visual characteristics of the word to trigger the vicarious experience of "cat", the mastery of the word must be accomplished without any kind of objectifying matching process. The word has its own visual structure, and this may be found in combined forms such as "cat-like" or "catty" or even "cat-o-nine-tails"; but the sign in no way resembles that which it signifies. Nor does it provide the ancillary information that pictures can offer, i.e. the word offers the broadest possible scope of meaning because usually there are no modifying clues. However, a picture may simultaneously, as an icon, provide such broadly general information, but it also can present such visual qualifiers as color, texture, gesture, size, etc. For this reason, perhaps, Quine is prompted to state that "learning of a new word is commonly a matter of learning in context—hence learning, by example and analogy, the usage of sentences in which the word can occur."[11] For what the picture offers

directly, if attended to, can only be achieved by words in the context of sentences. Dare I quote the old adage about a picture's thousandfold worth compared to a word in this regard? The basis for the inclusion of pictures (illustrations) in reading texts is essentially for the iconic meanings that attempt to duplicate the message of the text. Thus when the child sees the sentence "See Dick catch the red ball," he also is presented with a picture that supplies the same gross information.

With such primers what the child does in translating the words into life meanings may be called reading; but in only the most insignificant of ways might he be thought of as engaging in any form of art process. Historically iconographical analysis provides the detective-art historian with clues necessary for creating specific versions of the history of art. But for the purposes of general education the pictures in books are much more versatile and thus provide greater symbolic potentials as well as more direct sensual experiences.

There is little doubt that, so far, I have been too narrow in my explication of reading as a school activity. I'm sure that today none but the most superficially educated person would characterize that process as a form of mechanical decoding and so be content with the notion that the accurate vocalizing of words is indicative of reading comprehension. Reading is a process, albeit a mysterious one, and we know at least that one of its objectives is to bring literature to life, i. e. one of the reasons we read is to engage the ideas of others.

> *Is your school producing children who are readers or merely children who know how to read? The means for measuring that difference can be found in children's response to literature . . .*[12]

Although linguists typically do not use the terms *denote* and *connote* in discussing the relationship of signs and that which is signified (what philosophers and more humble laymen refer to as *meaning*) all recognize distinctions in language use between the more and less specific intentions in signs. When we give written directions to some other person we try to provide phrases that are as unambiguous as possible, that increase redundancy and decrease uncertainty of meaning. We strive as much as possible to make believe that we are using a code where each sign has a single equivalent in life experience, i.e. that each sign denotes a specific meaning. In literature, of course, the writer recognizes the idiosyncratic nature of the interpretive act and relies on the connotative potentials of word

phrases. Reading literature, therefore, is no mere matter of mathematical decoding.

The writers of literature (I refuse to consider seriously the concept of "children's" literature) rely on the open-endedness of interpretation and provide the reader with verbal raw materials needed for the creation of meaning: the figures of speech like metaphor and simile. These phrases function as fuel for the imagination, stimulating whatever neurological processes permit us to generate mental images from arbitrary signs. Literary phrases tend to suggest, in their studied sparseness, rather than stipulate. Thus "the reader must infer what is not stated, whether the imaginary work be dense and complex or simple to the point of being skeletal."[13]

> *Through the use of words alone, the writer creates sight and sound and emotional response. By reading words alone, the reader sees, hears, and feels. Both are demonstrating an act of mentality, the connection of minds through which belief is suspended in the interest of illusion.*[14]

By using only words, but by using them in ways governed by the culture, the writer objectifies his idea, and the reader creates his response. Literature has its own sets of conventions and forms and its own ways of telling and knowing. A poem is one such major literary contrivance that has a multitude of poetic offspring: sonnet, ballad, limerick, epic, etc. The short story is not a novel or even novella. Science fiction is a form of fantasy that is distinct from a fairy tale. Each is a member of the literature family, and each is governed by its own set of rules. Learning to read pieces of literature, of whatever shape and size, demands much more than even the "accurate" literal interpretation of the words.

> *This is the burden of the word as medium; the word in relation to paint, or notes, or marble. The word with its connotations. The word, above all, with its definitions. The word frayed, debased, exploited, disfigured, and, most formidably of all, trapped in its dictionary. This is the challenge unequaled in any other art.*[15]

And there is no reason to believe that the various conventions, rules, structures, or whatever notion characterizes the distinctive structures of these literary forms are casually learned. "For most people, increased sensitivity to literature does not come as the natural result of human interaction."[16]

Learning to read literature, it would seem, demands paying particular attention to the manner in which words are strung together, to the conventions that distinguish these forms of writing from all others.

Do the same conventions apply to picturebooks? Is there a parallel to a "figure of speech" in the domain of pictures? What about the more fundamental writing rules of linearity or word order or punctuation or capitalization—the sinews of written language that make it possible for us to construct meaningful statements? Would becoming a competent reader of short stories help us better to experience a picturebook? (You'll note my unwillingness to use "read" in this regard.) And vice versa?

What is a picturebook? Barbara Bader supplies us with a literary definition.

> *A picturebook is text, illustrations, total design; an item of manufacture and a commercial product; a social, cultural, historical document; and, foremost, an experience for a child.*
>
> *As an art form it hinges on the interdependence of pictures and words, on the simultaneous display of two facing pages, and on the drama of the turning page.*
>
> *On its own terms its possibilities are limitless.*[17]

More matter-of-factly, the picturebook is a covered, bound bunch of pages of several sorts. There are the end papers, page of bibliographical data, title page, and then the body of pages which may have pictures only or some combination of pictures and text. I cannot ignore this distinction because, among other considerations, it forces me to set off the illustrated book from the picturebook. But, for the moment, it will suffice to examine some of the characteristics and conventions of those books whose body is composed exclusively of pages with pictures.

At one level of experience I have already suggested the iconic possibilities of pictures (page 74). Indeed it is the most typical kind of response found in the reviews of such books: they are reported in exactly the same way as a book with a text, i.e. with a summary of the narrative. Of course, should the reviewer wish to quote from this kind of story, the only avenue available would be to reproduce the image. But would this be a direct quotation or a paraphrase (to push the analogy a bit)? Should anyone desire to take a quotation from this essay, for example, all that needs doing is to carefully copy out the word phrases as they appear on this page. There is relatively little lost if the reprint uses a different typeface,

color of ink, or length of line. But can the same be said for the reproduction of a picture? If the original color comes out in black and white and the original size is reduced three-fold, and if the total double page is not presented, is there also relatively little lost? The visual qualities affecting response to pictures are of a different order and magnitude than those affecting the reading of texts. To be ignorant of other than simplistic iconic meanings relegates the experience of picturebooks to one of superficial instrumentality. The attempt to "read" the pictures as if they were words leaves their esthetic values awasting.

If not the narrative exclusively, then what ought one attend to in experiencing a picturebook? There are several considerations which might be clumped into two groupings: 1) the visual elements of discrete pages, and 2) the book as an entity. In the former case we have all the factors that enter into the decision making of the book designing team. The catalog of a recent exhibition at the National Gallery in Washington, D.C. (Paper in Prints) reminds us that "the aesthetic role of paper in graphic art is obviously a crucial subject, and provokes immediate response as soon as it is named . . . ."[8] How crucial, I fear I didn't realize until the facts of surface (texture, receptivity, and level); color (white, prepared paper and dyed paper); size (blank margins and decorated margins) were spelled out for me in convincing detail. Each of these variables singly and in collaboration does indeed affect the visual responses we make when attending to a printed page.

Other vital considerations are those of the printing medium (offset or letterpress, for example), the inks (both the kind and number), the process of making the color plates through separating processes, the binding (method of stitching, weight and kind of cover, end papers)—each of these visual factors while having little to do with the gross narrative aspects of the story, very clearly contributes to the feeling we have about that narrative. Below is a lengthy quotation from a John Updike review of a new translation of an Italian novel. It makes an eloquent case for the look of a book.

> *My niggling dissatisfaction with Italo Calvino's benign, witty, and admirably radical book extends to its physical production. Harcourt Brace Jovanovich has constructed a volume that appears elegant; yet the cards, when reproduced smaller than a postage stamp, are hard to see, and the effect of interwoven word and image leaches away in the ample margins. The fault is not one of uncaring, as a comparison with the Italian edition by Guilio*

Einaudi shows. The American publisher has spaced the English translation to coincide page for page with the Italian text, and thus has been able to use the black-and-white tarot rectangles in the exact format presumably designed, or at least approved, by the author. Indeed, the cards are slightly larger, and in spots more legible, than in the Einaudi edition. But the Italian paper is whiter, and the type is larger, and the book is smaller and lighter and pleasanter to hold, and the cards in the narrower margins sit tighter to the text: the effect, in sum, is significantly more natural and less posh. Confronted with a kind of chapbook, the American publisher has felt a tug toward the coffee table; Harcourt's oversize, unhandy volume includes eight color plates of the Visconti tarots, adding to the print and woodcuts a gratuitous third texture. Texture, that almost uncontrollable quality, is crucial in a pictographic work, and perhaps the sleazy genius of offset printing is to blame for what we miss here. Twenty years ago, in the obsolete days of letterpress, zinc "cuts" of these cards would have bitten sharply into the paper, and expressed themselves as another alphabet, different in type but not in kind from the Roman. As is, the page lacks the memory of metallic impact and its warmth; the ostensible beauty of the American edition of "The Castle of Crossed Destinies" has the unintended effect of emphasizing its preciosity, enlarging its imperfections, and preventing the reader from feeling as friendly, holding it as he should.[19]

And if such a difference for a novel, how much more important are the decisions relating to the sensory qualities of a picturebook? But the visual elements don't operate singly; they are designed to function together. There are conventions of visual organizations just as there are of verbal syntax. Without the suggestion of a horizon, figures seem to float in space. The bottom of the page is down so that something with its feet pointing to the top of the page is understood as being upsidedown. If something overlaps another, it is closer to you. Animals can wear clothes if it's a make-believe story. These are examples of visual conventions—and they must be learned. But within these culturally established rules there are major variations possible. It is possible to have a hero delineated with the kind of distinctive naturalism of Hyman's *Snow White* or with the total nonobjectivity of Lionni's *Little Blue and Little Yellow*. The world can be depicted in almost cartoon fashion by means of Harold's purple crayon or as violently expressionistic as Golem. In most cases, the pictures lose their symbolic characteristics and become *the* experience. Sendak creates a world full of wild things that exist in themselves not because they stand for some other kind of life experiences. Very few (perhaps onomatopoetic

terms do) words can make this claim; rather these arbitrary signs are combined into phrases which attempt to evoke mental images by means of their suggestive juxtapositions and collective references to life experiences. There are no lexical names for Sendak's creations; they just exist phenomenologically. And, to the extent that we are examining the pages as single graphic images, we would be well advised to look to the domain of art for ways to enhance the critical capacities of those who wish to experience picturebooks. To repeat still another time, the simple narrative is *not* what the pictures are about.

Rather than elaborate on techniques for responding to art objects which may be found in a multitude of other texts, I would like to muddy the waters a bit more. Statistically there are very few wordless books; perhaps one half of one percent of the books aimed at children each year are so free of text. But a large number do depend enough on the visuals for their appreciation to be considered as picturebooks rather than illustrated books. To what extent does the introduction of the word affect the visual response? "There is no question that the acute selection of alphabets and careful spacing of them can make a sales pitch for a fraudulent elixir look like a report from Harvard professors. No person is immune to this form of persuasion, and the only defense against it it knowledge of alphabetic forms and of graphic images."[20] Is the message ever so simple that the physical shape of it makes no difference? Perhaps very few of us will ever reach the heights of involvement that Shahn writes about. "But then I began to discover the delights of type: fitness, elegance, tradition, humor, the color of pages, the vast panorama of choices, each with its own peculiar flavor which added so much to the words said."[21] Can we ignore what seems so self-evident—once someone shows the way—that the shape of the content (another thought borrowed from Shahn) ought to be considered if we wish to derive fuller meaning from our experiences in books? Does the reading process, as practiced, attend at all to differences in effect of the typefaces used, their place on the page, color, length of line, variation from horizontal orientation? Studies seem to indicate that legibility is the dominant consideration in the choice of reading materials.[22] Treating the page as an art object demands attention to the affective qualities of the text and its visual relationship to the overall page design.

While each page (or double page) may well be explored as a graphic entity, there is a further complication that should be addressed. A picturebook is more than a bound gallery of images. As such the sequence of

impressions from front cover to back offers another source of esthetic response perhaps more akin to a motion picture than a painting. Here again the narrative function of the pictures plays a role, but here also that role is only a fractional part of the total esthetic drama. What effective visual sequencing can do is set up a series of esthetic anticipations determined as much by the uses of the design elements as by any representative symbols. Does the color and texture and decoration of the cover set an emotional tone that sets the "reader" up in appropriate anticipation? Do the endpapers contribute to that mood? How is the title page designed with type and pictures to maintain the drive to push on? Then, how is character established? What kind of space is created? How is the mood maintained? How are surprises introduced and resolved? Is the ending consistent with the whole? What role do the final endpapers and cover play in the total experience?

Of course such visual concerns are essentially ones based on movement, implied on individual pages but actual in the turning of these sheets—both forward and backward. Does a close-up on page 5 "set up" the shift of scene appearing on page 6? Does the obvious neglect of the distortions of the gutter cause the sequence from page 10 to 11 to destroy the momentum of the visual impact? Is there an inconsistency in the color of a hat on page 4 and on page 12? Such questions are concerned with visual esthetic problems dealing with the book as a whole rather than with the isolated image on the page, and I believe they contribute to the fullest understanding of the picturebook, if they are attended to.

When there is a text, the extent to which the words and pictures (or better stated, the visual totality) complement one another is vital to the overall meaning. You all can cite instances of stories with grossly inadequate pictures that do little more than echo the literal meanings of the words and often weaken the verbal impact by their inept technical handling or superficial characterizations. And there are some volumes where the visuals so dominate the overall effect that the text appears as insipid titles for each page. Even books in a foreign language have esthetic value, but in valuing a picturebook with text it is important to seek out the ways by which each set of conventional signs presents itself for appreciation. While each may have its own set of rules for organization and its own learned routes for interpretation, while each may have its own life, together they should provide a much fuller experience than either alone.

The distinction I make between the illustrated book and picturebook is built on this consideration of mutual enhancement. An illustrated book

is conceived of as a totality, where illustrations are applied to a text and can be as easily removed without harming either. How many times have Aesop's fables been illustrated, or has Alice? Which visual setting is best? It seems quite appropriate to remove a Rackham illustration and hang it, framed, on the wall because it was conceived as a moment in time of the total narrative. It is complete unto itself. But how do you cut a piece out of a totality like *Trubloff* (The Mouse Who Played the Balelaika) without doing the piece and the remainder serious injury? The framed page of a successful picturebook has the aura of a fragment of a statue—interesting but incomplete. Obviously there can be no clear demarkation between all

picturebooks and illustrated books, but tendencies can be noted. While I would think it a waste to take the Dillons' illustrations in *The Hundred Penny Box* for granted and not spend time looking at each one for the subtlety of modeling or the evocative use of the frame or the virtuosity of the handling of the sepia tones, I can conceive of a reading of the story exclusive of this attention. But I cannot conceive of such a "reading" of Mayer's *Frog Goes to Dinner* (a textless book) or Sendak's *Night Kitchen.* These are works of art and must be experienced as such.

If I have been accurate in my exposition of the reading process and its target concerns, then at this point in my argument my case ought to be made. To summarize, reading is a process, as yet lacking universal definition, that permits a person to gain meaning from written words. The process is a mysterious one, complex and inexact because *unlike* a code there are no standard and global equivalents of word signs.[23]

> *No one can ever grasp exactly what another person might have had in mind, especially if the various distances which separate them are great; and, therefore, rather guiltily attempt an impossible task, one should welcome the necessity of creative interpretation and think of oneself as presented with a series of marks or traces which one can use to produce thought and meaning.*[24]

While this description makes the reading act similar to my conception of the act of responding to art, it nevertheless in no way avoids the issue of the difference in the elements and structure between written language and pictures. It is by attending to the syntax of our language and the way words gain meaning by being placed in certain linear relationships that one learns to read. One comes to know literature (the main object of the reading act) by studying literature, just as one becomes more familiar with the values of art by studying art.

I made a further distinction between word phrases and pictures when I pointed out that the former can claim only symbolic functions while the latter can be both symbolic (representative) and presentative (i.e. provide a direct experience). Further, the rules of organization are so much more complex and open to alteration through incorporation of conventions from other cultures that even the suggestion of *a* syntax for pictures or the notion of art as a language (except in the broadest metaphoric sense) is misleading. If you add to these concerns the view that the picturebook, as total object, is in reality the entity that must be understood, not the isolated pictures on a page, you have the points I wish to make.

A picturebook is, to my way of thinking, a work of visual art, not a piece of literature. Using them as preludes to reading the written language as if there were some logical hierarchical connection is a form of instrumentality similar to using picturebooks as a means to stimulate arts and crafts activities. There may be ancillary benefits derived from the activity (interest in looking at books, the notion of narrative proceeding from left to right, care in handling a book, increasing vocabulary through naming, etc.) but the theories of literature and theories of art are based upon different experiential processes. There may be economic or political reasons for schools attempting to unite these two disparate activities, but there cannot be valid philosophical reasons.

"To gain knowledge from reading, considerable semantic input is required . . . unless the reader already knows the material fairly well, he will gain little from it."[25] If the object of relating art to reading is the gaining of knowledge, I suggest that a more profitable avenue for such activity would be involvement in more direct and fundamental life experiences—nature study, playing with blocks, organized social games, and the like. Of course art is also a life experience, and if the picturebook is viewed as an art object and responded to as such, then it too can add to the fund of knowing which allows one to interpret written language.

A good picturebook has the potential for a transcendental experience, a carrying away beyond the stuff of the making into a state of mind where new and personal meanings can take shape. It is a medium for seeing the world in a partially novel fashion, for a unique sensually-intellectual experience we call esthetic. Not being bound by conventional meanings or narrow syntactical rules, it piques curiosity and provides new meanings upon each re-examination. Unlike a work of literature, a picturebook is not read—it is experienced.

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On Reading: The Great American Fetish

MALCOLM P. DOUGLASS

. . . *reading is a complicated process about which we know too little.* Levin and Williams, Basic Studies on Reading, 1970.

Problem enough, this, for a life's work, to learn how we read! A wonderful process, by which our thoughts and thought-wanderings to the finest shades of detail, the play of our inmost feelings and desires and will, the subtle image of the very innermost that we are reflected from us to another soul who reads us through our book.

And so to completely analyze what we do when we read would almost be the acme of a psychologist's achievements, for it would be to describe very many of the most intricate workings of the human mind, as well as to unravel the tangled story of the most remarkable specific performance that civilization has learned in all its history. Huey, The Psychology and Pedagogy of Reading, 1908.

IT COMES AS A surprise to many that despite three quarters of a century of intensive discussion and research regarding the nature of this complex behavior Huey described so aptly in his recently republished and wonderfully current book, we can still assert without fear of contradiction that here is a subject about which we yet know too little. It would be hard to estimate how many forests have been felled in the service of publishing the thousand upon thousand of articles and books which have been written since John Dewey, as long ago as 1898, wrote an essay from which the title of this piece is taken, "The Fetish in Primary Education," in which he described what to him then, and to many of us yet, is our overconcern with reading. Certainly it is a sizeable amount of acreage, for there remains no topic in education attracting a larger audience more rapidly or with more rabidness than does the one having to do with READING. Particularly is this so when the topic has to do with the particular issue which we might dub "the reading problem." For we Americans are, and have been since colonial times, transfixed with the idea that too few people learn to read well enough.

But the fact also remains, despite the great attention we have given to READING, we not only know too little, we appear to be far from attaining a clear understanding of this very complex process. The causes of our ignorance are many, but certainly central among them has been that only recently have we sought to understand the nature of the process itself. In the past, we have been satisfied to assume that we knew all we needed to know about the object of our concern. Even when we did think how READING might be described, we made several assumptions which now must be challenged. We thought of READING as a singular, even a unique form of human behavior. We considered it something quite unnatural, something that was difficult to learn, an ability acquired only through considerable concentration and certainly only the product of hard work. We elected to ignore the meanings given reading in everyday life where we have always felt entirely comfortable with the notion that one reads faces and gestures, dramatic presentations and other works of art, numbers, musical notation and the like. We even read between the lines! But what has this to do with READING? When we thought of that, and particularly where it was supposed to be learned—somewhere behind the classroom door—we put on a special set of blinders. We thought of that kind of reading as "getting meaning from the printed page." The task was simply to transfer the author's ideas from the printed page to the reader; we thought of the process as one in which information was in a

very real sense lifted up from one place and deposited in another. It seemed so obvious, no wonder our frustration when the skills of reading went so poorly learned.

Taking this view, we have mired ourselves in a hundred issues. When should READING be taught? How should we go about teaching it? It has sometimes seemed as if there was no other issue than whether one should go from wholes to parts (a whole-word approach) or from parts to wholes (the question of phonics first). What kinds of things should we teach children so they will be ready to read (presuming there is a quite dramatic shift from a "non-reading" state to actual READING)? How can reading difficulties be "diagnosed" and what is the appropriate instructional prescription so that such problems will disappear? How does one tell how difficult a reading passage is, and how can reading ability be assessed? And of course the bottom line has to do with judging how successful our reading instruction actually is.

Everyone is familiar with questions such as these which still dominate our thinking about READING. However, the past decade or so has at last revealed a growing interest in more fully understanding this complex behavior. This development has considerable potential since it carries with it the promise that we will gain new insights with respect to classroom practice. This is only a promise, of course, because as we shall see, reading instruction in America has followed a consistent course for many years despite much evidence suggesting such instruction may be extraordinarily inefficient, if not misdirected. However, we are now finding, because there is so much widespread concern with the subject, that people representing a very broad spectrum of interests are getting involved with what has become known as "the reading problem." As a result of this development, there are important gains potentially available; after all, READING *is* a complex process, and a thorough knowledge of its nature can consequently come to us only when diverse fields of inquiry are brought to bear on the topic. There are potential dangers, too, if only because a great quagmire of misunderstanding if not outright myth continues to surround us. The assumptions and common questions about reading just cited may be viewed as illustrative since, to a growing number of people concerned with the educational process, most of them do not strike at the heart of the problem. As I shall attempt to point out in what follows, there are other issues and questions which seem much more relevant than the highly mechanistic ones suggested by these commonly held notions. In fact, the ultimate question may well be whether READING can actually be

taught. We have proceeded on the assumption that it could be, and we have developed complex instructional programs in support of that view. We have literally set out to *invoke* READING in our young. I shall attempt to argue, instead, that such teaching as we do should seek ways in which it can best be *evoked;* that is, I will argue that the teaching of READING is a much more subtle affair than we have previously imagined and that its emergence depends upon a kind of nurturing which never has existed in our schools to any great degree, and, of what little there is, forces are at work which may well destroy it entirely. I shall conclude with some suggestions for art and the art curriculum.

THE FETISH UNLEASHED

It is sometimes said that history provides information which helps us avoid repeating past mistakes. Whether or not that is ultimately true, it may be instructive to review briefly the story of reading instruction in America, for it surely makes one wonder. Dewey's concern over the reading fetish, voiced now almost three-quarters of a century ago, was actually nothing terribly new. Americans (at least our European-American forefathers) were tied up in knots with it almost as the last foot left Plymouth Rock. The reader may recall that to our Calvinist forefathers, reading was an essential element in the religious experience. If for no other reason (of which there were soon many), one needed to be able to read in order to interpret the Bible. Perceiving that the fathers of that day were for one reason or another not fulfilling their responsibilities, the Massachusetts Bay Company passed in 1647 legislation called "Ye Olde Deluder Satan Act" requiring communities of 50 households or more to provide instruction to the young in reading. We have never been the same since.

In the years that have followed there has been a steady chorus of concern over READING. At the time Dewey wrote his piece, we were entering a period in which that concern would escalate, seemingly with ever-increasing intensity. We were also entering a period when universal education was not only a national ideal, it was perceived as being a realistically obtainable goal. Everyone would go to school; everyone would learn to read. The importance of reading, then and now, was never in doubt. Aside from its obvious virtues in real life, it was absolutely essential to school success. Nothing has changed that even though the world is a vastly different place in which competing communications media vie for our attention.

The modern textbook had its origins in the latter part of the 19th century. Its growth and development accurately reflect how we have sought to solve what by then was considered to be an endemic problem in American society. At the outset, a single rather thin little book sufficed for the year's work. It contained a page, perhaps two, of instructions to the teacher. The remainder was devoted to reading exercises and questions. It was commonly the practice to teach the entire class at one time; everyone did the same thing; drill was the order of the day. Argument abounded over the best way to teach: a phonics, whole-word, or sentence method (the latter is no longer heard of).

What followed was, and remains, largely an elaboration on those early textbooks; the McGuffey Readers (more than 6 million in print!), the Bancroft Readers, and a few others dominated the sales picture, then only a pale shadow of today's highly lucrative marketplace. Chall has traced part of this evolution in her book *Reading: The Great Debate*, that "debate" having to do with the one major difference and that actually a minor one, in the continuing argument over the teaching of reading, namely, whether one starts with pieces of words or the words themselves. As we have seen, that was not a new argument in 1900, but it is one which has stayed with us throughout the development of the reading textbook, continuing even now, with the new technology which is threatening to replace books as the prime medium of instruction.

The trends within this repetitious play are worth a passing note. We have witnessed, first, an enlarging and a shrinking of the text. On the one hand, it has grown in the number of "stories," and in the number of words to be read. On the other, it has shrunk in that the number of new words introduced at any level has decreased markedly. A second development has been the number of textbooks within any given series. From one per grade were spawned at least two books which themselves were accompanied by a variety of associated materials, from tests to exercises of various kinds. A third has been the very rapid increase in the number of directions the teacher ostensibly should heed in teaching reading. From a single or perhaps two or three pages the modern textbook (teacher's manual) now approximates a small desk dictionary. There are directions for every lesson. Chall found that by the mid-sixties, they were approaching 2,000 words in length! The teacher is told exactly what to say and when to say it.

A concomitant development illustrates the absurdity which by the beginning of the current decade had come to surround instruction in

reading. Beginning shortly after the turn of the century, awareness of individual differences began to emerge. Reading failure was seen to be the result, not of improper instruction per se, but of poor teaching practices (as it is frequently today), namely, of teaching all children in a class the same thing at the same time. The answer was to divide the children according to their achievement in reading. The end result has been rather elaborate schemes of grouping; usually there are three or perhaps four such sub-groups created with the pupils split as many ways. (Of course, this procedure only *approximates* the level at which the child appears to be able to handle the instruction.) The teacher is then expected to provide three (or more) different lessons in reading each day, preparing by consulting the appropriate section of each of the teacher's manuals. If preparation only required reading a thousand words per lesson, it can readily be seen that the amount of such reading would be far more than most could manage. The result has been that teachers either ignore the teacher's directions in the manual or refer only to the "say this, do that" portions of it.

A recent development is of importance in this brief history. During the past decade or so, a technological revolution has struck the publishing industry. The results indeed threaten to replace the textbook as the primary means of instruction in reading. The lay person is only vaguely aware of the effect this revolution is having upon their schools generally, but particularly its meaning for reading teaching. Now the teacher's manual, the reader itself, appears in a different guise: on tapes and miniature screens electronic devices signal correct (and incorrect) responses, even selecting the next "exercise" on the basis of the previous answer. The combinations possible are apparently infinite. The expense of all this, as well, is incredibly high, but we continue to be willing to pay any price and go to any length.

Despite technical developments, it is only too evident we continue to approach the problem in basically the same way, i.e., we are teaching reading largely as we did half a century ago, and more. But instead of providing instruction in reading for a rather small portion of the school day, and over a fairly limited period of time (we have for many years taught READING through grade six, far longer than any other country), our fetish has leapt its traditional bounds in several ways. We are, for example, teaching it for a far longer period of time. It is not uncommon to devote an entire morning, at least in the primary grades, to the subject of reading. This means the instruction focuses either directly on reading itself or on activities seen as contributing most directly to the teaching of reading. This

accounts for up to two-thirds of the instructional time available to the teacher and, not incidentally, to the child. In the intermediate years, instructional time has also increased dramatically. Even for children who have gained independence in reading, who read widely and well, instruction continues. Nothing can be left to chance. But for those who are experiencing difficulty of one kind or another, special instruction is provided in addition to the work in the regular classroom. For such children, the emphasis on learning to read will continue into the junior high school and probably into the senior high school years. As we are only too well aware, such youngsters graduate from high school and frequently go on to a two-year and even a four-year college. Increasingly, as might be expected, special instruction is being provided at these levels. Meanwhile, earlier on, in nursery schools and kindergartens, the teaching of reading gets high priority. From experiences with what are termed "pre-reading" materials, special "pre-first grade" or "junior" classes are formed where children are given more exercises designed to "get them ready for reading." Without a doubt, READING is viewed as a good in itself, an end rather than a means to an end.

Our response to the reading problem, then, has been to attempt to improve instructional materials and to focus more attention, to spend more time and energy on reading teaching. We think the problem lies in our teaching; to improve it and the materials we use in teaching is to solve the problem. We have consistently pursued the same path over many, many years. We have believed that reading can be taught. We have believed there is a subject matter to reading, that one learns the subject matter, i.e., the phonics rules, names the alphabet, learns what suffixes and prefixes are, discovers little words in big words and goes through a host of related skills as we learn how to "attack" "new" words, as we learn how to read.

The subject matter of reading is derived from a number of sources: from prior experience with textbooks that appear to be successful, from analysis of mature reading behavior, from studies of what children who have difficulty in reading do when compared with the "mature" or "competent" reading model. When that subject matter is translated into instructional materials, there *are* some observable differences. Different phonics rules are taught at different points in the instructional sequence (or not taught at all in one but emphasized in another), different words are used, different skills appear at different times. But these differences are minor.

So we are fundamentally following the same star as did all those who have come before us, but with an increasing intensity which borders on hysteria. The fetish of READING has spread across every level of schooling, in major ways I believe impairing our judgment and making it increasingly difficult for us to respond rationally to significant information. For READING is now a highly political and economic as well as educational issue.

THE FETISH UNKNOWN

In search of some kind of calm in this ever-escalating scene, it is perhaps instructive to contrast our experience with other countries. I have intimated that the American experience is unique, as it apparently is, for no other country aspiring to universal literacy experiences the level of reading problems we do. It is neither productive nor useful to make direct comparisons or to suggest that there are specific procedures that should be adopted as a result of such comparing. Every country is different; each has its own set of values, some more in conflict with our own and with each other. But the fact remains: despite such matters and despite what ultimately might be the definition of literacy, such countries have no major difficulties in inciting their young to at least initial (and satisfactory) levels of competence. In the Scandinavian countries, for example, only about 4-5 percent of the children entering school experience initial reading problems. By the time they are ten or so, this figure is halved (I speak directly from intensive study in Norway, particularly). In many countries, children are expected to learn to read before they begin their formal schooling (This is common, for instance, in a number of Asian countries). Whether children enter school without having reading skills, or whether they acquire them prior to entering the formal educational system, READING generally is not seen as a problem. (A survey conducted in Norway a number of years ago revealed that on a list of fourteen "problems" teachers identified, the least important on the list was READING.)

It is also interesting to observe that, where countries do provide initial instruction in reading, none provide instruction for more than a very few years. In most it is provided during the first year and is carried on in some instances a second or even a third year. But for most, beginning independence in reading means the child improves his reading skills by reading in the content areas, and of course literature is one of these. However, the kind of instruction provided in America, the teaching of reading for its own sake, is unknown except for the very beginning stages. In countries

where it is common for children to come to school reading, we of course see no formal attempt to teach it as such.

Of all the reasons as to why such differences are observed between the American experience and those other countries where literacy is a reasonable national goal, the most popular is that the other languages are phonetically regular while English is not. We like to think that English is especially cursed in this regard, that it is a highly unpredictable language containing words and ways of speaking that derive from no logical source. To this arbitrary, mischieveous, almost totally senseless quality we assign all our woes.

If one compares the surface features of English with most other languages, it does at first blush appear that almost any other is more regular. But whether those apparent differences are significant is not all that clear by any means. The work of a number of transformational grammarians in recent years strongly suggests that English is a much more "regular" language than study of its surface features suggests. Words which appear to be highly capricious relatives of other words are seen as following strict rules at what is sometimes termed the "deep structure" or meaning level. If this is true, as I believe it to be, then we would need to consider more carefully the importance and role of meaning in language learning and in reading particularly. Since children for whom English is the first language learn to speak and listen as quickly and competently as children for whom other languages are first learned, we might wish to consider that a very subtle form of "regularity" is at work. We might conclude that the surface features of a language, i.e., what it appears to be like as we analyze it for its obvious characteristics, are for all intents and purposes not very important. Such reasoning suggests that the language learner is somehow in touch with these very subtle processes, among which is meaning. Put another way, we would be saying that meanings guide the development of language, including reading.

Traditionally, however, meaning has not played a very important part in reading instruction, strange as that may seem. We have thought that meaning would come along after the initial skills were established. Hence, the widely accepted cliche: "First one learns to read, then one reads to learn." And, the widespread publication of beginning readers, the content of which has given rise to countless jokes based on their inanities. We have studied at considerable length the ways children put together their oral language, and we have speculated on how this seemingly miraculous development occurs. This has yet to be done with READING.

We consequently know virtually nothing of how a child grows in his ability to read print although it may be valid to assume there are important similarities between learning to speak and listen and learning to read and to write.

A perhaps more persuasive argument for explaining the differences observed might have to do with the age at which formal instruction in reading is begun here and there. Although it is by no means universal, it remains true that in most countries formal teaching does not begin until the age of seven. As we shall see, seven is a kind of watershed year in the development of logical thinking. *If* instruction in reading is to be based on teaching about the surface features of a language, as is the case virtually everywhere, relying in such instances upon the child to put the big pieces of reading together largely on his own, then one would expect greater success if reading instruction were delayed. There have always been a few who have urged just such a delay—Dewey was one of the first in America to think it the wise course—but such a suggestion has never been given much serious attention. But it has been the general practice elsewhere, and it presents us with a clear distinction between our own way of proceeding with many others. At the same time, there are also countries where such instruction begins at earlier ages.

Then there are numerous other conditions affecting to some degree the differing experiences in teaching reading. The extent and role of a self-fulfilling prophecy is impossible to devine with much accuracy although it certainly appears to be a factor in all learning. To what extent does the expectancy of success and the fear of failure affect us and others? Most other countries are considerably smaller than the United States, most are more homogeneous in their values and expectations. In schools where teachers, children, and parents are more likely to hold similar goals and attitudes, we would expect some differences. But of one thing we can be sure: materials of instruction do not assure greater success. America is rich beyond belief when it comes to the variety and extent of materials available for the teaching of reading. (One English headmistress declared she thought we would buy a dinosaur if we thought it would help us teach reading, and if one were available.) Compared with what is available elsewhere, it surely is an embarrassment of riches,

We are clearly faced with a dilemma. On the one hand we are a country with immense physical and human resources which we have put in the service of READING with unstinting optimism. We have, however, not basically changed our approach to solving what we perceive as a serious

reading problem. That is, we have sought solutions not by taking a fresh view and basically altering our approach to teaching and learning; we have sought solutions by intensifying our previous approach. This has fundamentally involved increasing the amount of instructional time at any particular age level as well as across age levels and by securing more instructional materials. On the other hand, we see a very different experience beyond our own national borders. There instructional materials are at a minimum, as is the amount of time spent on instruction. We would like to think that the differences are simply a matter of a "regular" language versus an apparent "irregular" one. But there are other factors at work which certainly must be considered. The evidence that English is particularly cursed seems not all that clear; as well, there are other matters in the mix although their particular significance is not entirely clear. Still the difference between the American experience and others remains, and it can be nothing less than disturbing.

READING: A BROADER VIEW

I wish now to cast READING in a broader frame, eventually drawing the implications I see in such a view promised earlier. As we have seen, we Americans generally have tended to think of READING as a rather isolated behavior somehow connected to writing, listening, and speaking, but still apart from these so-called "language arts." (It is common in curriculum circles to label all of these concerns "Reading and the Language Arts," so carefully do we harbor these distinctions.) We do not concede any potential relationship with other ways of knowing. We have taught reading separately from these other language functions and even more separately from other curriculum concerns such as mathematics, art, science, music, and the like. We have seen it as an end in itself, something one learns to do first, mastery of which is essential to further learning. We have thought, if we can teach the subject matter of reading properly, there would be readers, and so there has been an interminable search for the one best way to teach, and for children to learn. We have rarely strayed from the notion that reading could be taught.

But READING is, as we know, an extraordinarily complex process. It involves every part of the neuro-muscular system, every aspect of the mind. We do not yet know what the critical elements are in this behavior, if indeed some *are* more critical than others. The process itself is a blending of all of these elements into a unified and self-directed whole. Should it surprise us, then, when we realize that virtually every child upon entering

school already possesses the ability to read? It really should not. We live in a world of signs and symbols. But beyond that, every human has a special capacity, one which sets him apart from all other animals. That is the ability to represent (re-present) experience which in turn is accompanied by a capacity for mastering the conventions of the many languages which societies have invented to stand for experience. That is, verbal language as well as its written and printed form, consists of agreed upon signs, a code, if you will, which has a phonology, a syntax, a semantic content generally agreed upon by a particular speech community. All other languages represent to a greater or lesser degree certain conventions, the understanding of which allows them to be read. Music is one, mathematics, the natural sciences, the arts, all re-present experience through conventions, of one sort or another. How an individual masters or comes to understand any particular set of conventions is not really known. In mastering the conventions of English, or some other verbal language, we remain particularly at a loss as to just how this is done.

We do have, however, many descriptions of individuals as they proceed toward such mastery, and we can perhaps make some intelligent guesses. For instance, the child learning to talk seems to be engaged in a great deal of self-instruction. Attempts to teach children directly to talk, to use the correct forms or conventions, appear not to work at all. There seems to be some sort of self-realization or self-discovery operating. For example, somewhere along the line, acquisition of the ability to use plural forms correctly (observing the convention) begins; prior to this time this particular convention is absent from child speech. Then, as the ability develops, use of the plural where the word actually changes (rather than the simple addition of *s* or *es*), results first in saying such things as *foots* (for the plural of foot). Only later does *feet* come under command. There seems to be a great deal of generalizing, some of which results in the appropriate use of new forms, some of which results in our example here, requiring further generalizing before the conventional usage is mastered. In language development overall, however, we see little evidence that direct teaching is of any significant value. What we seem to see is opportunity, practice, play with words, if you will, combining with pre-existing potentials resulting in language growth. That this may in fact be the way one learns to write and to read seems not to have occurred to us.

One must have the capacity to represent experience itself if one is to master the conventions or languages through which society in general represents its experiences. Thus there is an associated capability, one

which, again, all humans possess the development of which can be traced to the earliest months of life. The distinguished Swiss epistemologist/psychologist, Jean Piaget, has pioneered the study of this development, which he calls the semiotic functions, the ability to re-present experience through various means.[2] At birth, as near as we now know, the child has no memory for prior events. Somewhere around the age of five or six months, we begin to see evidences that such a memory is coming into existence. For instance, where previously the child would take an "out of sight, out of mind" view whenever an object for some reason or another disappears from sight, we now see evidence of a memory for the existence of such objects. A little later, in a game of peek-a-boo, it is clear that the baby knows what is missing and anticipates its return with great glee. But the ability to represent experience himself through some form of overt action will have to await further development.

Not until sometime after a year, and probably not until around eighteen months do we see the first of Piaget's true semiotic functions appear. Now we begin to notice the youngster imitating something he has seen at a previous time. (Piaget calls this deferred imitation.) Piled quickly on this we see the emergence of other modes for representing experience. Piaget has described these as symbolic play, drawing, mental imagery, and verbal evocation. According to Piaget, they in general emerge in this order, but each continues a simultaneous course of development over many years. In symbolic play we begin with such activities as talking on a "pretend" telephone, baking in the kitchen with mother, serving dessert, etc. In drawing, the child begins by scribbling, but each attempt appears to Piaget at least to be one in which the child is seeking to represent reality as he perceives it (the adult view and the child view differ, of course, and so to understand the child view it is probably important to understand as much as possible of the child's intellectual development). Mental imagery allows the child to anticipate actions on objects as well as the results of those actions. As we shall see in a moment, this capacity is during the early years evidently quite overwhelmed by the child's visual perception of reality. In other words, no matter what an internalized mental image might provide in the process of logical thinking, seeing is believing. Finally, verbal evocation refers to the onset of language. Prior to this period, the child has learned to say a certain number of words, but language itself does not commence until the child begins to use it to represent experience ("Milk algone"; "Daddy, shoe," etc.). This begins somewhere around eighteen to twenty-four months for most children.

The ability to re-present experience through these various modes grows with great rapidity. For example, by the time the child enters kindergarten, he not only has mastered most of the conventions of the oral language (the phonology, the syntax), he has acquired a lexicon or vocabulary of perhaps four or five thousand different words. The vocabulary growth will continue at that rate (about a thousand words a year on the average) throughout the years of schooling, and beyond to an extent we cannot presently measure accurately.

Each of the semiotic functions apparently emerges quite naturally in the course of development. The question for the educationist would not so much be whether these capabilities will out, but the extent to which the environment can be enriched. For it is in the enriching that the child will have the opportunity to embellish and elaborate. For example, the child will find some way to represent experience through drawing beginning somewhere during the second year. The question is whether there will be a variety of materials and opportunities (and recognition of achievement); the overall quality of the experience is what is of paramount importance. We might say the same of each of the other of these interrelated functions.

It should not be surprising, as we trace these two developments, i.e., the emergence of various ways of re-presenting one's own experience and the almost simultaneous commencement of the mastery of the conventions or system of signs and symbols society employs for representing experience, that we see the emergence of abilities to read and write among pre-school children. It is simply a natural extension of what has come before. If the opportunity presents itself (the quality of growth and development increasingly become dependent upon environmental opportunity), children begin to extend their inborn capacity for making use of the systems by which society represents experience. Today, virtually every child entering school can read some of those signs and symbols. They may not all occur in books, but they surely could. Instead, many of them are seen in stores, on the television screen, in our streets, and everywhere about town. By READING in these circumstances, I mean responding meaningfully to printed and written signs and symbols. In some instances the child will be able to "say back" to someone what such signs "say." In others he perhaps may not, but such "saying" is not an accurate measure of knowing in every case.

We also observe a very large number of children writing. Usually, the child starts with the writing of his own name. He asks someone to show him how to do it. He has taken the first step in understanding that he can

represent himself, through writing, that writing requires a particular set of lines if *his* name is to result. At five, no more than six, the basic notions needed to read and write the symbols standing for the mother tongue are present.

It is consequently not surprising that a number of children develop these abilities to a considerable extent before entering school. Most do not, of course, not because they lack the ability or capacity but the opportunity. For those who do commence early, at four or perhaps five, it is interesting to note that most learned largely on their own. Durkin has studied early readers more extensively than anyone else (this has not been an extensively researched topic), and the similarities with the earlier stages of learning to speak are considerable.[3] Somehow, some way, the child senses the meaning of reading and writing. Frequently, it is through writing that reading emerges. And writing seems to be closely related to drawing. "Scribbling" leads to a request to show how to write a letter or word. A great deal of practice and experimentation follows, with an occasional question, a request for some kind of specific help. From there it is a short hop to reading printed words or written. And it may be noted, there seems to be no extensive relationship with intelligence in these developments. While Durkin found the intelligence quotient for her groups to be above average (particularly in her second study), children across a broad range of the intelligence scale were among her early readers.

Getting the meaning of reading seems essential not only to those who will read earlier than most, but among all children. Freyer studied children four through eight, attempting to discover their understanding of the meaning of reading.[4] She discovered that children who had a grasp of the meaning of reading were readers. As one child put it, "Reading is telling stories in your head." Those who had vague or inaccurate notions of its meaning were not reading independently. How does one teach the meaning of reading?

Another study by Jenkins is worth noting because it highlights another apparently critical issue in the learning-to-read process.[5] Jenkins administered a number of Piagetian tests to children ages six through nine to determine how many had begun the third major step in Piaget's description of how logical thinking develops in children. Piaget has postulated that at about age seven children begin to be able to think without being overwhelmed by apparent but extraneous factors in a particular problem. Prior to this age most children believe that if a substance or quantity *appears* to change its characteristics, then that change is real (our

seeing is believing example). In a classic experiment, easily replicable, he poured a liquid into two beakers of equal size. The child participates in this event, until he believes that there are equal amounts in each beaker. The liquid from one beaker is then poured into a tall, narrow beaker. The question is asked: "Is there more, less, or the same amount of liquid in the beaker now?" The child who has yet to enter the stage Piaget has dubbed "concrete operations," i.e., who believes the liquid has actually been transformed because it appears to be so, will assert that there is now more liquid. And when the liquid is returned to its original beaker, it will not be "the same." For the child who has begun to think logically, the apparent change makes no difference; he cannot be fooled by appearances any longer.

Jenkins discovered that successful readers were children who had begun to think logically, those who were not fooled by the beaker and a number of other experiments. This was the case regardless of age; if a child could "conserve," i.e., could keep in his own mind the fact that the quantity or substance had only appeared to change but had not really changed, then reading was no problem. Children who were not yet conserving, who had not yet entered the stage of concrete operations, were children yet to achieve independence in reading. Interestingly, there were a few children who were still not conserving who were reading independently. Given Durkin's findings, we might expect this to be so. Learning to read apparently does not require logical thinking, else the very young child, as in her study, should not be able to read printed words. But if that is so, why did the rest of the group split so dramatically with conservers as readers, and with non-conservers as those unable to read independently? The question requires further exploration, but one highly possible prospect is that children who have entered the stage of "concrete operations," those children who are getting their logical thinking abilities under control, have been able to use those abilities in the learning-to-read process. We know, for instance, that virtually all of our instruction in reading depends upon logical thinking. The lessons and exercises we provide generally require the child to analyze the activity of reading and to apply logical thinking skills to them.

We also observe that most children enter this next stage in the evolution of logical thinking at age seven, regardless of the society in which they live. There are numerous confirming cross-cultural studies; what variations there are appear to be relatively minor. We may recall that the modal age for beginning instruction around the world is seven or thereabouts.

We may also take note that it is common practice to teach reading using logical modes of instruction. The success experienced elsewhere and findings such as those of Jenkins may give us some clues regarding ways of adjusting to situations in which the learner appears to be unable to profit from formal instruction.

It appears to me, then, that READING is an integral and interconnected part of a much larger whole. That whole is an apparently innate capability, which appropriate experience releases, for representing experiences of various kinds. Studies of early development have led to the conceptualizing of different categories which are thought to be descriptive of these capabilities. I have referred here to those established by Piaget, but there are others. The point is not so much what they are called, but that humans employ different ways in representing their experience. As we look at their beginnings, which occur long before the child enters school, there is clear evidence that they are interconnected, that they evolve in some kind of concert. There is every reason to believe that the development, and particularly the elaboration of one in some yet not clearly understood way strengthens the development of the others. It is not reasonable to think that such interconnections cease, over time, and in fact, we have some evidence to suggest that they must in some way reinforce each other. However, we have only a limited amount of data regarding the interrelationships of the various verbal language functions, probably because it has been common to think of reading and writing not only as being more or less isolated from one another but from speaking and listening as well. However, Walter Loban did conduct a longitudinal study of something over 200 children in the San Francisco Bay area.[6] He followed them from kindergarten to the completion of high school, noting all along the way that children who were accomplished in one function tended to be similarly accomplished in the others. The reverse was also true: children scoring in the lower quartile in one function, such as reading, tended to score in the same quartile in the other three verbal language abilities. Such findings, along with what we all know from everyday experience, strongly suggest that there are ties within and between reading, writing, speaking, and listening.

Particular note needs to be made of the apparent interrelationships of writing with reading. We have noted that Durkin's experience was that many children who read early appeared to begin by writing. It seems to me that drawing and writing have much in common. In fact, observations of four- and five-year-olds in a nursery school setting quickly confirm that

many children at these ages not only draw spontaneously, they attempt to write as well. They will early on ask for assistance and soon engage in writing just as they do in drawing. They ask for assistance because in some fashion they have learned that there is a certain way it is done, there is a convention to be learned. They soon can write their own name, then other things, and before long they begin to read things other children have written. It all evolves very naturally, without any formal instruction.

In the regular classroom, those familiar with what in this country has come to be called a "language-experience approach," have exploited this interconnection between drawing and writing, and reading. Children are basically led from drawing and then writing about what they have drawn, to reading their own stories and then the stories of other children. In short order they spot the same or similar words in the stories first of other children, and then in books written by others; in a highly meaningful atmosphere, where the experiences recounted are charged with personal involvement, reading develops. This is the kind of teaching most likely, in my judgment, to evoke reading behavior.

MEANINGS FOR AN ART CURRICULUM

It is with some hesitancy that I address the question of the relationships of all I have suggested about reading behavior and an art curriculum because I do not harbor any notions of expertness as an art educator. But with that caveat, it does seem to me several rather obvious things might be said which the art educator then will have to interpret within his own frame of reference.

I believe we have seriously underestimated the direct contribution drawing and other modes of "writing" make to the development of reading abilities. Where "art" begins and ends in the process of representing experience I am not sure one can say, but it does seem clear that the various modes humans employ (Piaget's semiotic functions), and the conventions they learn in the course of developing finer and finer capabilities in this regard, are closely interrelated. It appears that development in one aids and abets development in other modes. And it seems evident that we employ one mode to get to another, for we witness among children who read early, and others as well, that drawing/writing play a very important part in the process of evoking reading behavior.

It is really quite remarkable the extent to which children, even before entering school, are able to employ different ways of representing experience. Yet we seem to ignore the existence of much of this, determining

that we will implant "new" modes, such as reading or writing, through formal instructional processes. The youngster has already made giant steps toward mastery of these conventions, if we will only notice. So the problem of the educationist, as I see it at least, is not so much to instruct but to create an environment where developments already under way can be furthered. To me this means embellishing and enriching that environment so that the widest range of opportunities to such a furthering will be present. The art curriculum obviously has a significant role to play in this, at every age level.

If art indeed makes an important contribution to the stimulation and growth of reading abilities, as it seems clear to me it does, then it is ironic that the art curriculum has been so curtailed in recent years. It is nothing more than a case of cutting off one's nose to spite one's face when reading instruction thus forces the reduction of attention to an area which in all likelihood is going to contribute more directly to the goal sought than the increased instruction itself. But this is not simply true of the art curriculum; other content areas have also fared badly. There has been a steady move toward setting READING as the primary goal of our schools, particularly our elementary schools. The result has been to reduce the emphasis upon the intellectual and aesthetic concerns and to see READING as a proper end in itself. If one believes, as I do, that it is probably presumptuous of us to think that we can teach a child to read, then one cannot adopt a very optimistic view about the course our schools are taking. It is only realistic to appreciate that a reversal of the present trend will come about when school authorities are convinced that a traditional school concern, as art education is, does indeed make a direct contribution to reading development.

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Metaphorical Perception

D. N. PERKINS

Poor Polonius. He says: My Lord, the queen would speak with you, and presently. Hamlet: Do you see yonder cloud that's almost in shape of a camel? Polonius: By the mass, and 'tis like a camel, indeed. Hamlet: Methinks it is like a weasel. Polonius: It is backed like a weasel. Hamlet: Or like a whale? Polonius: Very like a whale. (Hamlet, Act III, scene ii)

HAMLET'S GAME of seeing and saying can teach us more than it does Polonius. Images and words are often considered separate worlds of experience, thought, and expression. Each has little commerce with its rival. What one can do well, the other cannot. Or so the story goes. But however separately specialized are the realms of word and image, visually-based metaphor and simile locate a common ground. Hamlet gets his similes from looking, and from seeing what isn't really there. Unremarkably, the painter as well as the poet often gets his notions by looking. But re-

markably again, the painter too may do so by seeing what isn't really there—for instance by discerning the ideal form within the mundane flesh.

This article explores how such perverse perceiving contributes to the linguistic and visual arts and to creation and communication generally. It argues that recognition of patterns contrary to fact is a unitary ability that plays an important role in many human activities. Hamlet's discovery of a camel in the clouds hints at a mental act good for much more than twitting Polonius.

But the story of this idea will have to be roundabout. A preview is in order. Hamlet's sort of seeing might be called *metaphorical perception.* At least, so F. E. Sparshott calls it in an essay on the limits of metaphor, pointing to such cases as seeing the front of a house as a face or hearing gulls' cries as laments.[1] I commence by clarifying what metaphorical perception means and considering how it relates to the creation and comprehension of metaphors in poetry and art. Contrary to its name, metaphorical perception turns out to be not that much involved in the creation and comprehension of metaphors. Nevertheless, how metaphorical perception occurs is examined next. There results a way to generalize metaphorical perception to a broader concept, *contrary recognition,* which does illuminate the creation and comprehension of poetic metaphors. But what other roles might contrary recognition play? I turn to contrary recognition in making and perceiving works of visual art. Then the metaphorical richness of everyday speech creates an opportunity to examine the contribution of contrary recognition there. These three examples build a case for the widespread relevance of contrary recognition. A concluding section argues that contrary recognition in such different domains as poetry, painting, or physics reflects the same ability in a significant sense. A concept bridging language, the visual arts, and other areas, contrary recognition deserves much more attention from psychologists and educators alike.

This paper deals mostly with theory, hoping to clarify our use of language and images. Nevertheless, toward the end I will suggest how some of the ideas might apply to the teaching of reading and to education generally. I will offer these words as reassurance that a translation to pedagogy can be made, but not as a comprehensive translation. Much more could be said, but that is another paper.

SEEING DOUBLE

What does *metaphorical perception* mean? Consider some examples. Hamlet sees his cloud double—as cloud and also as camel. Many more things than clouds can be so seen. The Rorschach test provides an artificial case, and such natural circumstances as the grain of wood, irregular cracks in walls, and clusters of leaves give Rorschach tests of their own. Sparshott mentioned faces in houses. One also finds faces in the fronts of cars, trucks, clocks, and radios. Coke bottles, trees, mail boxes, hydrants easily take on the guise of human figures. In what is called "symbolic play," the child discovers rockets in pencils, garages under and mountains on top of easy chairs, and so on.[2] Everyday language recognizes many double seen-as by such terms as *flying saucer; saw horse; eye of a needle, hurricane, or potato; ear of corn.* Such terms are usually used with little consciousness of their metaphorical content. But the metaphor remains clear and sometimes draws attention to itself. Then we *see* what is meant.

Like mundane perception, metaphorical perception should be taken to involve more senses than sight alone. Sparshott mentions the gulls' cries heard as laments. Also there are doors that protest on rusty hinges, typewriters that sound like popcorn, and so on. In general, metaphorical perception requires apprehending a sensory likeness of one thing to another. One thing strikes the perceiver as looking or sounding, or even smelling or feeling, like another. In saying this, I am not trying to clarify metaphor by stating that it is a matter of likeness. Rather, I aim to clarify metaphorical perception by saying it is a matter of sensory rather than other sorts of likenesses. Analyzing metaphor in terms of likeness or similarity is ineffectual, in part because the latter concepts are no clearer than metaphor itself.[3]

All this raises a question which at first seems hardly worth asking: what does metaphorical perception have to do with metaphor in language or art? The obvious answer—everything—turns out to be quite wrong, and the question proves its worth after all.[4] More specifically, does an act of metaphorical perception always involve coining or comprehending a metaphor? Does understanding or inventing a metaphor always require metaphorical perception? Not by a long shot in both cases. This limitation motivates the later more general concept of *contrary recognition.*

Why the negative answer? First of all, to see double is not necessarily to apprehend a metaphor at all. The car or house in which one finds a face makes no metaphor. Whether linguistically or pictorially, metaphor typically asserts that something is what it in fact is not.[5] But cars and houses do

not make assertions at all. At best, the seeing double presents an opportunity to make a metaphor. One can go on to remark that the house is a face, or an artist might sketch a house, playing up its facial character so that the sketch becomes an equating of house and face.

So all things seen double are not metaphors. Then are all metaphors dependent on seeing double? More broadly, are all metaphors dependent on sensing double—on metaphorical perception in some sensory modality? Clearly not, since most metaphors are not created or comprehended in the presence of real objects to be perceived.

But in an article relating metaphor and "seeing as," Marcus Hester won't let such literalism stand in the way. He posits a "seeing as" through the mind's eye rather than the body's.[6] Hester also holds that "seeing as" need not depend on sensory likenesses, but only on a visual image of at least one of the things metaphorically linked. However, I am going to insist on sensory likeness for metaphorical perception. To do otherwise would be to depart from the paradigm of the camel in the clouds. Then metaphorical perception, even by the mind's eye, could not contribute to metaphors which did not depend on sensory likenesses. In fact, most do not, as when Shakespeare writes in Sonnet 18 that *summer's lease hath all too short a date.* Summer does not literally look or sound or smell or feel like a lease or something leased. For another sample, in *Troilus and Cressida* Shakespeare styles time as a beggar: *Time hath, my lord, a wallet at his back/ Wherein he puts alms for oblivion,/A great-sized monster of ingratitude* (Act III, scene 3). Hester offers this example, pointing out that one cannot see the image of time in the beggar; time does not have a physical appearance to be seen. Also, Max Black begins a classic paper on metaphor by listing seven examples which he takes to be "unmistakable *instances* of metaphor." As it happens, not one depends particularly on sensory likeness.[7]

Other metaphors hover on the verge of involving seeing double without being very full cases. In Sonnet 73, Shakespeare calls boughs in the fall *Bare ruin'd choirs, where late the sweet birds sang.* True, such a bough extends horizontally and emptily. But the visual match seems slender. One cannot imagine the bare ruin'd choir hovering within the bough nearly as well as one might the camel in the clouds. Shakespeare's trope depends more on the whole semantic context of birds as singers and the declining season than it does on blatant sensory imagery. In fact, poets' metaphors seldom trade exclusively on sensory likenesses in the way that *ear of corn* does. I spent some time seeking a pure case in favorite poems

and failed to find a single instance out of many metaphors. Surely there are some to be found. But apparently and unsurprisingly, poets usually want to do a little more with their metaphors than that.

Scarce among poetic metaphors, perhaps pure cases of seeing double are paradigm among pictorial ones. Pictorial metaphors are metaphors asserted by pictorial means such as cartoons, paintings, photographs, films, and—in an extended sense of pictorial—statuary. Such metaphors are often called visual metaphors. But this term risks confusing presentation by pictorial means with dependence on visual likenesses. As will be seen, the two need to be kept distinct.

What are some examples of pictorial metaphors? Pictorial metaphors occur less frequently than linguistic ones, but by no means prove rare. Discussing conventional codes of film, Soren Kjorup recalls Hollywood's pictorial metaphors for the sexual act: trains, steaming kettles and the like.[8] Caricatures and political cartoons often present pictorial metaphors. For example, some years ago Oliphant portrayed Richard Nixon flying through the air with arms spread and bombs dropping from under his jacket.[9] Thus Nixon became one of the planes he had ordered on bombing missions. For another example, the caricaturist Levine has drawn side-by-side a conventional caricature of Samuel Beckett, and another portraying Beckett as a buzzard.[10] The collar of Beckett's sweater becomes the ruff around the buzzard's neck, Beckett's nose the beak, and so on. Various sculptures by Claes Oldenburg entitled *Clothespins* at first sight simply amount to giant clothespins standing on their wide ends. But they hold a secret image. Many of them can be seen as couples embracing. The gripping ends are two heads. The clip holding the halves together becomes locked arms. Oldenburg himself sanctions this reading, comparing his clothespins to Brancusi's *The Kiss* in a sketch.[11]

Measured by these samples, pictorial metaphor usually relies on much more than visual likeness. The dynamic energy of the train contributes at least as much as its appearance. The Nixon caricature made Nixon's familiar arms-spread V's-for-victory stance into a plane. But the point of the cartoon went far beyond this far-fetched likeness. The caricature equated Nixon's desire for victory with his methods of trying to achieve it—an equation which showed itself to be all the more true in other ways as time went on. Though Nixon is not all that visually plane-like, perhaps Samuel Beckett *is* that visually buzzard-like. The features Levine catches in his caricature appear also in photographs of Beckett. If not before, at least after Levine, Beckett does look like a buzzard. But again,

this tells but half the story. Levine's caricature as much invokes Beckett's black wit and vision as it does his appearance.

Oldenburg's *Clothespins* are pure cases of visual likeness. The embrace hovers in the clothespin much as Hamlet's camel in the clouds, and seems to make no non-visual point. At the other extreme, pictorial metaphor may not exercise visual likeness at all. In an article on metaphor, Sol Worth mentions a scene from Soviet director Sergei Eisenstein's film *Strike*.[12] A close-up of an informer is followed by another of a jackal running into the woods. Since Beckett can look like a buzzard, I suppose the informant might look like a jackal. But even if so, this clearly would not be necessary. The point is that he has behaved like a jackal. So as with linguistic metaphors, pictorial metaphors too usually involve more than visual likeness and come in all accents on visual likeness from exclusive to none. Metaphorical perception strictly taken could at best play a limited role in creating and comprehending linguistic and pictorial metaphors.

SEEING CONTRARY

That is the bad news, but there is some good news, too. Though narrow in scope, metaphorical perception makes plain some important features of the psychological process involved. Those features are more general than metaphorical perception itself, as the next section will show. Then what sort of a mental event is seeing double? How does one come to a second seeing of something?

In many ways, certainly. Another person may draw one's attention to a double guise, as Hamlet slyly does for Polonius. As remarked earlier, dead metaphors like *ear of corn* or *saw horse* sometimes spring to life. But most relevant here are moments of personal discovery. Hamlet, gazing at the clouds, finds a camel. Or one notices a face in a house, a kiss in a clothespin, a gnome in a hydrant, and so on. These seem to be acts of recognition. One becomes aware of face, kiss, or gnome in much the same spontaneous way that one recognizes the house, clothespin, or hydrant in the first place. But this is an odd sort of recognition, one occurring despite two discouraging conditions.

First of all, seeing double may be contrary to the evidence in the stimulus. The face in the house does not look much like a face at all. Recognition has to succeed in the face of this adversity. Of course, recognition frequently occurs despite adverse circumstances like distant targets, partial views, out-of-focus images, and so on. But in seeing double, recogni-

tion goes beyond the call of duty. Recognition operates not just despite partial or degraded vision obscuring an identity, but despite visible evidence actually contradicting the new identification.

Seeing double is contrary in another less obvious way. Perhaps it is less obvious because too obvious. A cloud is not a camel, a clothespin not a kiss. Any such new recognition runs contrary to the thing's previously perceived identity. This means more than just a new label in place of an old one—"Kiss" instead of "clothespin," The new recognition challenges the previously perceived patterning of the thing's parts and qualities. The handle of the clothespin becomes also two sets of legs, the spring becomes arms, and so on. Limp lobes of a cloud are suddenly feisty feet of a camel. Psychological experiments attest that such perceptual reorganizing can stand in the way of a new perception. In the early 50's, Dale Wyatt and Donald Campbell projected slides of scenes at successively sharper degrees of focus.[13] Subjects guessed at the contents of the pictures during each stage from the most blurred to the most focussed presentation. The investigators found that the subjects became trapped by their own earlier hypotheses. Control subjects who only viewed the pictures at a given degree of focus correctly identified the slides more frequently at that degree than did subjects who had made earlier mistaken guesses on less focussed presentations.

Are the two "contraries" really different names for the same thing? No. Either may occur without the other. In the experiment mentioned above, the correct answer would always fit better than any of the premature conjectures. Seeing it at last would represent perception contrary to prior perception but not contrary to the evidence. On the other hand, suppose one passes someone on the street and notes that he looks somewhat like Gerald Ford. The stranger has no previously established identity in one's mind. In noticing a likeness to Gerald Ford, one recognizes an identity contrary only to the evidence.

As a general rule, the "contraries" work against achieving a metaphorical perception. They are what metaphorical perception overcomes. But some qualifications should be noted. The contraries do not always create practical difficulties. Some seeings double virtually force themselves on one—the gargoyle front end of an Edsel, for instance. Moreover, occasionally contrary evidence actually may facilitate recognition in a roundabout way. There is some reason to believe that people recognize a person in caricature at least as readily as, and perhaps more readily than, they recognize him as accurately portrayed. Of course, it is

not that the inaccuracies of caricature in themselves help. Rather, inaccuracy in some respects is the price of making other identifying features blatant. The nose ridiculously long in caricature misrepresents the exact length of the subject's nose in order to blatantly declare that the subject has a long nose.[14]

Taken together, the contraries write a recipe for metaphorical perception. They tell how to do it by defining the obstacles to be met. The previously perceived identity must partly give way to a new recognition depending on a tolerant rather than strict fit between the newly perceived identity and the stimulus.[15] Surprisingly, this recipe is one that can be followed simply by trying. The stranger who looked like Gerald Ford suggests an exercise in metaphor for anyone. Try strolling down a busy sidewalk deliberately seeking likenesses. All of a sudden, the street will fill with Gerald Fords, Archie Bunkers, next door neighbors, and so on. Here recogntion occurs contrary to the evidence but not contrary to previously perceived identity. But the same exercise works with acquaintances, too. By trying, one can re-recognize them as other acquaintances or public figures. Everyday objects yield up second identities to the same deliberate metaphorical looking. Heretofore I have spoken only of spontaneous seeing double. But metaphorical perception is a hoop the mind will jump through on command.[16]

CONTRARY RECOGNITION AND METAPHOR

Metaphorical perception does not have that much to do with creating or comprehending metaphors, linguistic or pictorial. That conclusion was reached earlier on two grounds. Linguistic metaphors usually were not devised or understood in the presence of real objects to be perceived, metaphorically or otherwise. And most linguistic and pictorial metaphor depended only in part or not at all on sensory likenesses. If metaphorical perception was to illuminate the creation and comprehension of metaphor, it had to do so indirectly, by pointing to a more comprehensive concept. The contraries of the prior section suggest such a concept. It could be called *contrary recognition*—recognition contrary to the evidence and/or a prior identification. Contrary recognition includes metaphorical perception as a special case.

Why might contrary recognition have more to say about metaphor than did metaphorical perception? Because it avoids the limits of the latter concept. For one point, recognition here refers to the general human capacity for pattern recognition. Consequently, recognized likenesses

need not be sensory likenesses. For instance, one might recognize that two differently worded sentences have the same meaning, even though they do not look or sound alike. Second, recognition is not restricted to recognizing things in the world. For instance, one might speak of recognizing an error in one's thinking. These are examples of normal recognition, not of contrary recognition. But if normal recognition goes beyond things in the world and sensory likenesses, contrary recognition plausibly would do the same.

Then can contrary recognition be found at work in creating and comprehending metaphors? Since metaphors are contrary to begin with, it is the "recognition" part of this question that needs attention. A yes answer requires finding cases where metaphors are conceived or grasped by acts of recognition, rather than more roundabout processes. Some positive evidence emerges from a study of poetry writing. For a number of years, I have been investigating creative process in established and novice poets. The poets think aloud as they write. When a poet suddenly achieves a metaphor or reaches another notable closure, sometimes the poet is interrupted and requested to give a step-by-step account of the last several seconds of thought. Obviously, these methods risk disrupting the very process under study. But they need not do so. The procedures, more detailed than these few words convey, have been tuned over the years to intrude minimally. Poets usually report little disruption and approximately normal progress on their work.[17]

The materials gathered offer several examples suggestive of contrary recognition. Occasionally a straightforward metaphorical perception made its way into a poem. A poet in one session wrote a line about crocuses with orange tongues. Earlier the same day he had walked down the street and observed that crocuses " . . . had a kind of orange—I guess it's the pistil—in the center of the flower, that seemed like a tongue, and I'd never noticed those before."

Other cases seemed to involve sensory likeness but not recognition of things in the world. Rather, poets apparently recognized new identities in mental images. One could not be sure. Recognition seemed implicated because the metaphors emerged abruptly. Mental imagery seemed implicated because the metaphors depended on sensory likenesses. For instance, one poet explained, "I just was trying to describe the backs of the fish and then I thought of like *knife-like* and then *blade-like*. Another poet had written *You come inside the hands of rain*. At once she changed the line to *You come inside the fingers of the rain*, explaining that "fingers sound more

like rain than a whole hand." Here, two steps plausibly were involved. First, the poet sensed a mismatch between hand and rain. *Hand* seemed too heavy-handed. Second, she suddenly recognized the "finger-likeness" of the rain. As was especially apparent in the larger context of the poem, her metaphor depended on expressive as well as sensory likenesses. But how were explicitly sensory likenesses involved? Her metaphor and probably its discovery depended in part not only on a visual but a tactile parallel. Rain not only looks more but feels more like fingers than a hand. This may serve to recall that as psychology uses the term, mental imagery means more than specifically visual imagery. All the modalities and mixes can contribute.

Recognizing a new identity in a mental image might be thought to be impossible. Whereas a real world fish exists independent of one's conception of it and so allows a new recognition as a knife, one's imagined fish comes wholly from some mental reservoir. One might reasonably suppose that the image had no reality independent of one's idea of fish. Another pattern could not be recognized in the image because the only reality the image had lay in its conceptual fishness. Certainly plausible, this happens to be wrong. The poet does appear to see the blade in the fish. And if one cannot be sure there, one can test the matter with one's own mental imagery. Imagine an open umbrella. What new patterns can be seen in it? A bat. And what else? And then? So an image created with a first meaning allows another. This implies that the image has some mental reality apart from its parent significance. The image acts as a stimulus in its own right, permitting alternative patterns to be discerned in it.

Contrary recognition of images might explain the conception of many metaphors based partly on sensory likenesses. But what about metaphors like *Summer's lease hath all too short a date*, which make sense but call up few sensations? The theoretical answer has been given already. Recognition need not mean recognition of or dependent on sensory likenesses. Just as sentences of similar meaning need not look alike, summer would not need to look like a lease or something leased for Shakespeare to recognize that pattern there.

But who can say how Shakespeare really thought? Instead, let me offer an example from my studies. A poet was writing about hearing people talking at a party. He wanted to convey the straining of people to meet. He remarked, "I first saw *fragments colliding*. And then, in coming back to it, I saw the possibility for *planets colliding*. And that may be too, uh, pseudo-cosmic." Whether or not he or we are satisfied with his figure,

here the process makes the point. He speaks of *seeing* his metaphors. This suggests they came as acts of recognition. But were his figures dependent on sensory likenesses? No. Fragments or planets colliding do not look or sound like people straining to meet and striving to communicate. The parallel is on a more abstract plane: the dynamics of striving unsuccessfully to communicate is somewhat like the dynamics of fragments colliding.

The foregoing makes the case that making metaphors sometimes involves contrary recognition. But what about understanding metaphors? Consider *the fingers of the rain*. My impression is that this and like tropes are understood imagistically: one sees the point by seeing, and feeling, the finger-likeness of the rain. But is this really contrary recognition? Hasn't the poet simply told us what the likeness is, so we have nothing left to do but contemplate it? No, the poet has not. The poet only equates fingers and rain. The reader must follow through to find the sense in it, and may very well fail to do so. Nor, Marcus Hester points out, can any explanation or admonition compel the reader to see the point, though they may help.[18] So a gap separates the metaphor as stated from its comprehension, and often contrary recognition would be the mental operation which fills that gap. Of course, this contrary recognition challenges the reader less than the poet, who had to discover the metaphor in the first place and then set it up for the reader. But the reader performs a contrary recognition nonetheless. A similar account might hold for *summer's lease hath all too short a date*. One cannot *see* the point, except metaphorically, because the metaphor is not visual. But one might recognize the point.

It would be too bold to suggest that all metaphors are made or read through a bare act of contrary recognition. Albert Rothenberg has published some accounts of a more complex process of conceiving metaphors,[19] and indeed more roundabout examples occur in my data also. So far as reading metaphors is concerned, one must recall the extended metaphors which poets sometimes spin out for line upon line. Clearly such metaphors could not be comprehended in a moment of recognition. However, contrary recognition may often play a role within these more extended processes. Sometimes contrary recognition would be one step in conceiving the metaphor; in other instances, contrary recognition would be the test of "rightness" a proposed metaphor must pass. I think that one or the other of these usually is the case for compact metaphors—metaphors which a few words can deliver effectively. Indeed, a few words suffice only because such metaphors allow a rapid

recognition-like understanding. In summary, there is every reason to think contrary recognition to be a major resource in the conception, selection, and comprehension of metaphors.[20]

METAPHORICAL PERCEPTIONS AND THE VISUAL ARTS

Important to the literary arts, contrary recognition might also contribute to the visual arts. Since works of visual art are there in the world to be seen, one might look for metaphorical perception specifically rather than contrary recognition generally. So where might metaphorical perception be found? Such examples as Levine's Beckett-as-buzzard and Oldenburg's *Clothespins* point in one direction. Perhaps works of art often represent two different physical things at the same time. Indeed, one can find many instances by such surrealists as Dali and Magritte. But examples are rare in art percentagewise.

Metaphorical perception does its daily work for art elsewhere, in the phenomenon of representation itself. It is no accident that E. H. Gombrich entitled Chapter VI of his *Art and Illusion* "The Image in the Clouds."[21] One sees George Washington in a portrait much as one might the camel in the cloud. Of course the detail is finer. But just as the camel is recognized contrary to the evident cloudiness, so Washington's visage is recognized contrary to the texture of the paint and other features which deny the presence of Washington or anyone else in the flesh. In fact, the perception of almost any representation involves recognition of parts of wholes contrary to certain features of the representation, as Gombrich and many others have emphasized.

How does a representation misrepresent? Even a high-quality color photograph fails to replicate visual reality. The subtleties of color and range of intensity fall far short of fact. The flat pictorial surface belies the depicted spatial layout. Rarely do we view photographs from such a distance as to recreate what the camera saw. The more realistic traditions of painting achieve even less of a match with reality. Going further yet, line drawings abandon color and shading and require the viewer to flesh out their wiry skeletons. Much of modern art departs even from depicting shapes of things. A pile of geometric forms may represent a human figure. So to varying degrees, and always to some degree, the "reading" of representational or semi-abstract art involves recognition contrary to the evidence.[22]

The parallel of pictures with camels in clouds can be pushed further yet. The contrary evidence does not vanish away as one reads what a pic-

ture represents, just as the cloudiness does not disappear as one sees the camel. Except in *trompe l'oeil*, the representational surface remains a presence. The flatness of the painting and other mismatches with the "real thing" lurk in the corners of perception. So like camels in clouds, pictures are seen double. This has an amusing corollary. Pictures which play with seeing double as does the Beckett-buzzard are not just seen double. The pictorial surface adds a third seeing. Such works are seen triple.

Of course, how prominent the double aspect of pictures is can vary considerably. Realistic traditions strive to keep counter-evidence minimal and unobstrusive. A public used to the style is the artist's partner in this; although still there, familiar kinds of counter-evidence are less noticed.[23] On the other hand, much art deliberately departs from traditions of realism. Counter-evidence becomes prominent as the price of other effects or even for its own sake. Resistance to a completely effortless reading becomes part of the work.

All these points liken reading a representation to perceiving a camel in the clouds. But there is contrast too. One difference concerns the nature of the counter-evidence. Whereas the cloud's shape contradicts the camel's shape in ways hard to anticipate, a representation often contradicts what is represented in a systematic genre-related fashion. That is, paintings routinely signify solid things despite being flat. Photographs routinely represent a colored world even when they are black-and-white. This situation could influence how pictures are read. Recognition might deal with contrary evidence in representations by systematically discounting certain features, rather than by relying on a general tolerance for misfit. For instance, one might recognize a friend in a photograph not because one's recognition system operated despite the greys but because one's recognization system had learned to bypass considerations of color when looking at black-and-white photographs. Both procedures are kinds of contrary recognition. The contrast is between a general flexibility and a specific attunement to recurrent contrary circumstances.

The more attunement is involved, the more learning would be required for facile reading of pictures. Which model best describes picture perception and how long a naive viewer requires to learn to read representations of various sorts are issues within a larger controversy about the nature of picture perception.[24] I will not attempt to take sides here. But at least this must be noted. If some features sometimes can be discounted systematically, others cannot. One commonly approaches works of art presenting contrary evidence which one cannot anticipate. One does not

know the artist or the school. If the artist represents camels as casually as clouds, one's general powers of contrary recognition will simply have to cope.

In another way also, reading a picture differs from perceiving a camel in the clouds. In most prior examples, metaphorical perception occurred despite both counter-evidence and previously perceived identity. The latter contrary is irrelevant to reading representations for their contents. Not the pigmented or sculptural surface, but what the representation represents is its dominant identity first and last. F. E. Sparshott puts it in this way: " . . . to see a portrait [just] as a mess of oily clay is to see it as what for all relevant purposes it really is not. That is the wrong way to look at a portrait. It is not to see *the portrait* at all."[25]

I have argued that reading pictures for their contents requires contrary recognition, despite certain qualifications about the kind of contrary recognition. But also, reading representations for other than their contents calls for contrary recognition. But why would one want to go beyond what a picture depicts? Because a full response to art requires registering formal and stylistic features such as balance, texture, continuation of lines from one object to another, and so on. To read just for what is represented is to overlook such features. Sometimes overlooking is alright. The family photograph may aim at little more than recording an occasion. But the artist's photograph may make its point as much by means of its pattern as its scene. Not only is pattern often important, it is often ignored. Considerable evidence shows that children and other naive viewers of art focus almost exclusively on content, missing stylistic and formal aspects of works.[26] Whether or not learning to read what representations depict poses a practical problem, learning to perceive the formal and stylistic aspects certainly does.

Why does the detection of such features require metaphorical perception? First of all, many formal features are imperfect exemplars of their types. A triangle of depicted human figures is rarely a perfect triangle. Recognizing these structural features requires recognizing them despite the counter-evidence of their imperfections. Second, many formal and stylistic properties concern a picture's surface. One perceives the pattern of brushstrokes or the flat design of shapes contrary to a picture's dominant identity as a representation of forms in space.

One more hallmark of art deserves attention. Works of art express various emotions, moods, and personalities. A work may be said to be sad, bold, effete, nervous, angry, and so on. Might metaphorical perception

help in apprehending these qualities? Encouragement for this idea comes from Nelson Goodman's analysis of expression as *metaphorical exemplification.*[27] A work literally exemplifies—shows forth—such important properties as balance, color, texture. Now sadness or boldness are also properties which a work may be said to have and display. But only persons and not works of art are literally sad or bold. Goodman therefore argues that works of art exemplify such properties metaphorically and not literally.

Consequently, to detect what a work expresses is to discriminate in a contrary way, defying the ample perceptual evidence that a work is not a person. But is this recognition? The answer seems to be yes. Expressive qualities usually are simply seen. The work *looks* stern or sly, just as people may. So metaphorical perception contributes to reading a work of art for its expressed properties as well as for its formal and stylistic properties and content.

So far, this discussion of the visual arts has stressed the audience role. Of course, the artist must possess at least the sensitivities of the audience. But some further functions of metaphorical perception specifically concern the maker. One example recalls Hamlet's camel yet again. It is perhaps a small footnote to the history of art, but Leonardo da Vinci suggested harvesting ideas for works from clouds, spots on a wall, or the ashes of a fire. A 1785 book by Alexander Cozens recommended inkblots for the same purpose.[28] One cannot know how often such fresh seeings of things in the world inspired works of art. But fresh seeings of things in the work are surely important and frequent. Studies of the process of drawing reported by Kenneth Beittel offer some suggestive evidence. Particularly relevant is one of two polar process styles Beittel discusses. In the "divergent" style, the artist characteristically remains open to emerging possibilities and constant alternations of viewpoint.[29]

E. H. Gombrich's emphasis on the role of schemata also points to a place for metaphorical perception in creating art. A few words on Gombrich's thesis will prepare for relating it to metaphorical perception. Gombrich reviews the extent to which the evolution of the Western realistic tradition depended on formulas. He recalls, for instance, the pattern books cataloging varieties of noses, ears, and so on. Gombrich writes of a "making and matching" process: Formulas guide the artist's making. But the plug-in units are matched against a model or the artist's intended expression and consequently adjusted.[30]

Gombrich's "making and matching"process would not always involve contrary recognition. It would do so only when the fit of a formula to an

occasion was recognized despite some mismatches with the formula strictly taken. But this very often would be the case. For instance, an artist may break down a figure into geometric forms, and later flesh them out. To do this, the artist must discern where the ovoids and cylinders fit within the figure. In a more subtle sense, even finding a good scene from which to paint a landscape would involve contrary recognition. As Gombrich maintains, even landscapes painted from life are strongly channelled by schemata. But haphazard natural scenery rarely would suit perfectly those schemata. The artist must recognize the opportunity despite the flaws and remake the reality as he renders it.

WORKADAY METAPHOR

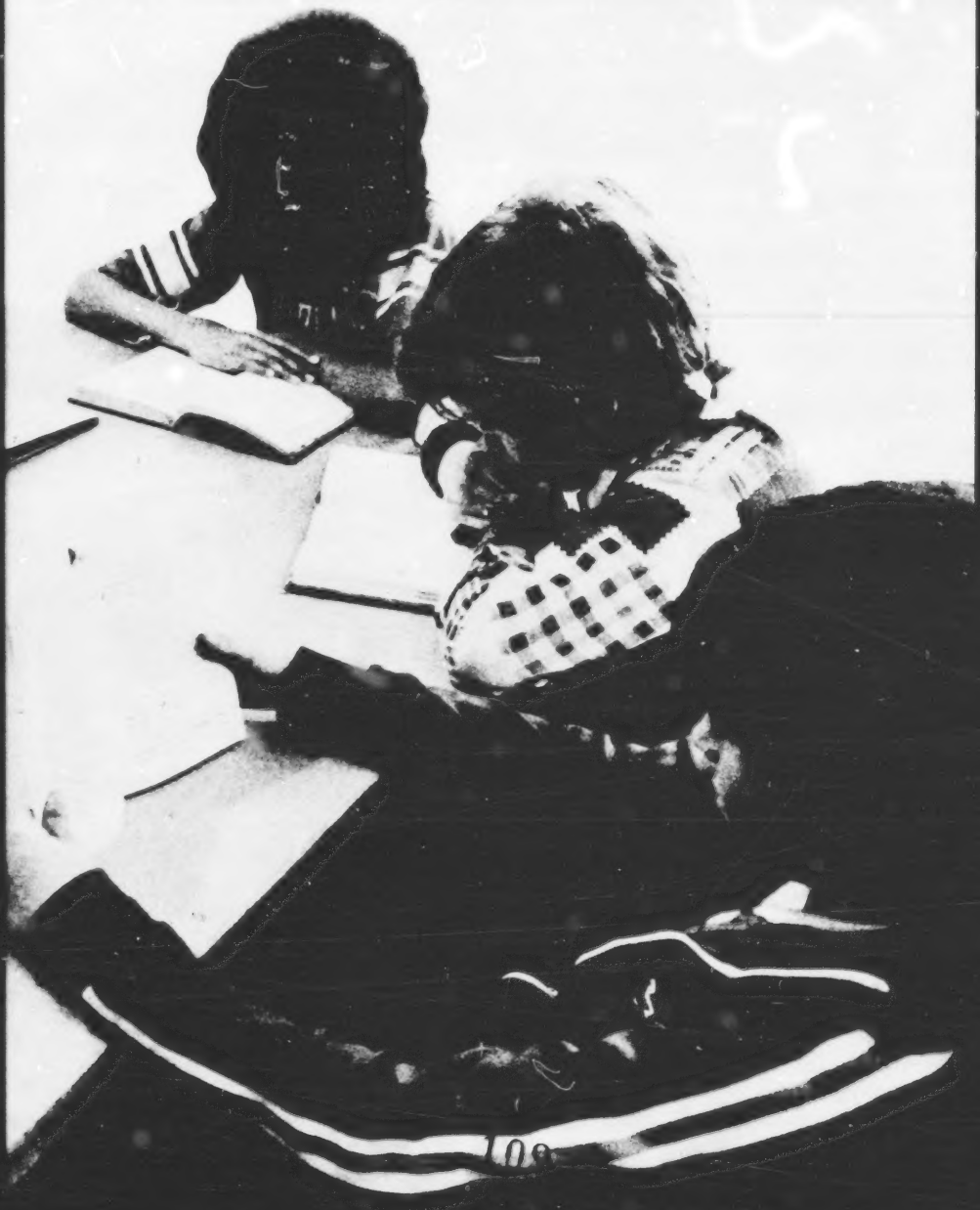
In the *Boston Globe* of Monday, May 16, 1977, the first six paragraphs of the lead article offer at least the following metaphors. Votes are *firm*. Circumstances may *strip* legislators of their seats. However, the legislators are making *last stands* to keep their old districts from being *pulled out from under them*. Functions will be *streamlined*. Underway are *flanking maneuvers* and *rear-guard action*. And a job *fell to* a certain party. Thus do many words leave their relatively palpable physical contexts to comment instead on human affairs. In fact, this is no trickle of tourists but a mass migration. Nelson Goodman has stressed that metaphor typically puts into correspondence more than the things it explicitly names.[31] A whole set of labels becomes implicitly aligned with a new domain of things-to-be-described. For instance, that *last stand* only samples the use of human posture and motion to describe non-physical actions and attitudes. One can stand up and be counted, stand for something, decide how much one can stand, or take it lying down. One can bend over backwards, or walk all over someone. And also we jump to conclusions, race through our work, stroll down memory lane, leap at the chance. In fact, it is difficult to find a verb of human posture or motion that does not have a somewhat familiar metaphoric usage.

So metaphor is important to workaday language. Then how do we understand and think to use workaday metaphors? Contrary recognition could be involved, but an obvious objection occurs. What is so contrary about understanding a phrase like *last stand*? The metaphor is dead or at least frozen. To understand *last stand*, one need not think of Custer or anyone else literally standing. Although good oak floors are literally firm, one need not keep oak floors in mind to understand the firmness of firm votes, friendships, opinions, expressions, voices, agreements, promises or

attitudes. When one thinks about it, one can see that these are metaphors. But in the psychological processing that mediates comprehension and use, surely they function much as other well-practiced conventional labels. The latent metaphors matter little.

Suppose all this is so. It only concerns workaday metaphors as the experienced speaker uses them. But the language learner's situation is

different. For the learner, a workaday metaphor is fresh. Accordingly, contrary recognition becomes important in discerning its meaning and remembering that meaning for later use. Of course, one should not pity the poor metaphor-beridden learner. The metaphorical basis of workaday metaphor is to his advantage. Instead of learning a new label by rote, the student can build upon an already established literal understanding.



That simply reflects a more general point about workaday metaphors. They flourish because they extend the reach of the language without adding new, arbitrary terms. They live on because they are easy to live with.

But have workaday metaphors really lost their metaphoric status for the more advanced language user? On the contrary, many dead metaphors are livelier than they are made out to be. Accordingly, they still often involve contrary recognition. A good way to test their vitality is to compare them with metaphors that are unquestionably dead, terms whose metaphorical origins are not apparent without a little etymology. Some nice examples come from C. S. Lewis, writing on the status of dead metaphors: "If we turn to those who are most anxious to tell us about the soul—I mean the psychologists—we shall find that the word *anima* has simply been replaced by complexes, repressions, censors, engrams, and the like. In other words the *breath* has been exchanged for *tyings-up, shovings-back, Roman magistrates,* and *scratchings.*"[32] One can compare the feel of terms like *firm votes* and *last stand* with that of *complexes* or *repression.* In the first cases, not only are the metaphors evident to untutored inspection but they seem palpably present in the casual saying. There is something very solid about a *firm vote* or a *last stand* that has evaporated in *repression*—unless we constantly remind ourselves with Lewis of that *shoving back.* This metaphoric presence surely sharpens our sense of the words, and the more present it is the more it does so. One can agree with Lewis on this pedagogical principle: " . . . he who could increase the meaning and decrease the meaningless verbiage in his own speech and writing, must do two things. He must become conscious of the fossilized metaphors in his words, and he must freely use new metaphors, which he creates for himself."[33]

METAPHOR AND THE TEACHING OF READING

Lewis praises metaphor as an intellectual and expressive resource. But how one masters that resource presents something of a problem. Rather than making metaphors, consider the mere matter of understanding metaphors in a text. Metaphor, and processes like contrary recognition required to deal with metaphor, challenge narrow concepts of what it is to teach reading.

One concept of reading takes the text as explicit. The text says what it means in so many words. To read, one need only know the written language and take note of the message. In fact, many construe the reading of pictures in the same way. Perhaps a sort of language of picturing must be

learned first. But given that, one looks and understands. Of course, none of this takes reading always to be easy. What is explicit may nevertheless not be at all obvious to the reader, especially the novice reader. Education has a standard solution to the explicit text the reader does not find obvious: *careful reading*. Careful reading is no snap. It requires from students alertness, intelligence, memory, organization. But the prescription does confront the problem of the explicit, non-obvious text. There is nothing wrong with any of this, as far as it goes. Certainly getting students to read what a text explicitly says is a challenging enterprise.

Nevertheless, metaphor shows the teaching of reading to be a greater challenge yet. As argued earlier, metaphors do not say explicitly what they mean; they leave a gap which the reader must bridge. Interpretive acts such as contrary recognition must mediate their understanding. Metaphors by themselves thus pose a practical problem of reading because metaphors are important constituents of many texts. But also, metaphor exemplifies a problem of much greater scope: texts can have implicit meanings in many other ways. One only need mention context, connotation, or irony to make that point.

In reading as elsewhere, what is implicit need not be obscure. On the contrary, the implicit message will often be obvious. For instance, the poet frequently strives for metaphors obvious in a sense. He seeks metaphors which will lead the reader to apprehend their meanings in an immediate spontaneous way. But some metaphors are more evasive and some readers less acute than others. When the point is not obvious to a reader, careful reading will not resolve the difficulty. However carefully one attends to a metaphor's words, one still may not recognize the point because the metaphor does not state its point in so many words. In general, texts do not lead their readers by the nose.

The solution might be called not careful, but *insightful reading*. One needs to learn to read not only the lines, but between the lines. One needs the knack of attending to suggestion and connotation. One must follow out implication and innuendo. One must exercise skills of seeing beyond the literal, skills like contrary recognition. In fact, contrary recognition is an ideal example of a mental act quite unnecessary in reading an explicit text. The skills required for insightful reading seem very differently directed from skills of careful reading.

How can students be taught to use resources like contrary recognition to penetrate the implicit levels of difficult material? I am not enough of an expert to say. Perhaps even the experts are not sufficiently expert to say.

At least, I suggest this. It is important that students have a feel for the challenge of the implicit and the endeavor of delving into the implicit. Discussing musical performance, Vernon Howard has emphasized the importance of "knowing what it is to" do something—such as hit a high C—from personal experience.[34] Such experiences, Howard points out, provide a model around which the learner can structure his further striving. Similarly in reading, a learner should "know what it is to" penetrate the implicit levels of a text—to strive for and achieve an initially evasive deeper understanding. The point is not just that such discovery-oriented reading is more memorable, more fun, or more reinforcing, though all this may be so. The point is that such experiences provide the student with a personal model of what it is to read deeply.

Unfortunately, education rarely offers these experiences. Whether explicit or not, the too obvious metaphor or larger text does not challenge sufficiently. The difficult explicit text only exercises skills of careful reading. The subtle metaphor or other text which the teacher explains gives the student a model of what to look for; but it does not provide the student with a personal experience of penetrating a text on his own. Essay assignments sometimes give the student an opportunity to exercise insightful reading; but they usually are insufficiently choreographed. They do not do enough to guarantee that as many students as possible will achieve some experience of deep reading relative to their own capacities. Education needs to work harder to lead students to paradigm experiences of penetrating texts.

Let us consider another problem in teaching insightful reading. I remarked above on the importance of explanations of texts: they model for the student what he ought to be seeking on his own. Of course, explanation serves the teaching of careful reading as much as insightful reading: it can illuminate the obscure explicit meanings as much as the implicit ones. But explanation makes a very different promise in the two cases. An explanation of an explicit text rearranges what is already explicit. It involves paraphrase, reorganization, condensation. To understand the explanation *is* to understand the meaning of the text. But an explanation of a metaphor or of other implicit aspects of a text seeks to make the implicit meaning explicit. Often, explanation must fall short of this. I noted earlier Marcus Hester's point that the gap left by the words of many metaphors was in principle bridgeable only by the individual himself. Indeed, this was implicit in the whole notion of contrary recognition: no explanation could guarantee that a person would follow through with an appropriate

recognition. Recognition was one of those "you can lead a horse to water" things.

There is no theoretical solution to this problem. Explanation is just not up to the job it sometimes undertakes. But there is a practical solution, one routinely exercised. When an explanation does not succeed, try a new one—longer, more directive, from a different perspective. This states one of the few short-term recourses of education. In the long term, one can hope that a generally more alert student will be able next year to recognize the point he could not this year.

But that short-term recourse often does not do its duty. The whole approach requires that the teacher monitor explanations for their success. The problem is that explanations often produce the appearance of understanding while the essence is lacking. This is so because the student may not recognize the point, but still understand the explanation! Let me illustrate with a metaphor. Suppose I mention to a companion that there is a cat in the bushes. He says he doesn't see it. I point to it and describe where it is located. Still, he may well not discern the cat. Yet, in some sense he has understood me. He can point as I have pointed and repeat back a paraphrase of my description. He certainly knows what it is to see a cat in the bushes. But he hasn't seen the cat.

Just as my companion could understand me without seeing the cat, so can a student understand explanations without recognizing the point.[35] But teachers and tests alike often monitor student understanding not at the level of recognizing the point but only at the more superficial level of paraphrasing back the explanation. It is possible to do better. For instance, I can easily check whether my companion has seen the cat. If he has, he can tell me what color it is. Likewise, the teacher can monitor real understanding of explanations on the spot: the student who genuinely recognizes the point can take the point further in some respect not explained.

UNITY IN DIVERSITY

Contrary recognition gets around. It exemplifies certain problems in the teaching of reading. It can be seen at work in everyday language use and in the creation and comprehension of works in the visual and language arts. Nor need one leave it at that. The practice of science is often noted to involve much metaphorical thinking, and at least some of that thinking would depend on contrary recognition. Beyond metaphor as such, science often requires discerning the orderly pattern underlying

noisy data and construing in a new way findings previously understood in another. Such apprehensions are contrary to the superficial evidence and to prior identity, respectively. When they occur as acts of recognition, contrary recognition must get the credit. I would not suggest that this was generally the case; the roads to scientific theory, like the roads to metaphor, are many. But contrary recognition surely figures sometimes. And what besides science? Mime clearly depends on contrary recognition; the mantel the mime leans on is not there, but its presence is apprehended. The same holds for some aspects of dance. Sign languages employ representational elements. One can go on and on.

Such remarkably moveable concepts as metaphor and contrary recognition invite attention for practical as well as theoretical reasons. Education, besides addressing the problems raised for the teaching of reading, could well seek to impart the general mobility of mind typified by metaphor. For instance, earlier, I mentioned the importance of model experiences for penetrating reading. Model experiences for creative thinking are needed also. In fact the achievement of understanding a metaphor or penetrating a larger text provides such an experience in a small way. But perhaps the creative nature of this achievement is not blatant enough. The activity of conceiving metaphors might provide a more powerful model. An exercise in making metaphors could offer paradigm experiences of invention. In an article entitled *Metaphor in the Classroom*, Barbara Leondar has taken the educational relevance of metaphor much further.[36] The possibilities deserve respect precisely because metaphor and contrary recognition make an appearance in so many human activities. Attention to metaphor and contrary recognition could have a handsome payoff.

But there is a misgiving to face. If contrary recognition gets around, perhaps it gets around too much. When a person seems to be everywhere at once, one jokingly asks whether there are two of him. The same question could be asked seriously of contrary recognition. Sensitive involvement in literature, art, and other areas requires recognition of very different patterns. Then, are there many different sorts of contrary recognition which do not have that much to do with one another? If that is the case, contrary recognition remains a label for an important class of psychological functions. But it no longer names a unitary skill uniting the visual and language arts and other human enterprises.

I argue for the unitary view. Of course the patterns a poet or an artist would recognize often differ. But contrary recognition is a kind of

stretched version of normal recognition. The stretching may be the same even where the patterns to be recognized are not. The earlier point that one can deliberately exercise metaphorical perception encourages this view. One need not practice at metaphorically perceiving specifically camels in clouds or Gerald Fords in passers by. Rather, a general tolerance for counter-evidence and detachment from previously apprehended identities seems to be involved. With a freed and questing vision, one looks to metaphorically perceive whatever patterns one can literally perceive. By this reasoning, a common mechanism does underlie many seemingly different uses of contrary recognition. Poet or painter, scientist or mime, need not look often for the same patterns. But they will look often in the same way—with the stretch that recognition unreasonably allows.[37]

NOTES

[1] F. E. Sparshott, "'As,' or The Limits of Metaphor," *New Literary History—A Journal of Theory and Interpretation*, Vol. VI, 1974, pp. 86, 92.

[2] It has been noted that symbolic play is the earliest metaphoric ability to emerge, appearing as early as eighteen months. A transferred action pattern—cradling a spoon like a doll—is thus the first manifestation of metaphor. Metaphors based on likenesses of appearance appear at 24-36 months of age. H. Gardner, E. Winner, R. Bechhofer, and D. Wolf, "The Development of Figurative Language," in K. Nelson, ed., *Children's Language*, New York: Gardner Press, 1977.

[3] N. Goodman, *Languages of Art*, Indianapolis: Bobbs-Merrill Co., 1968, pp. 77-78; M. Black, "Metaphor," in *Models and Metaphors: Studies in Language and Philosophy* Ithaca, N.Y.: Cornell University Press, 1962, section 4.

[4] The query can be taken in another sense also. Sparshott notes that a looker does not literally see, for instance, the camel in the clouds. The person does so only metaphorically. It is not that one is perceiving metaphors, but that one is only metaphorically perceiving. But my concern comes closer to the first of these. Sparshott, "The Limits of Metaphor," p. 86.

[5] Ted Cohen points out that some metaphors are literally as well as metaphorically true—e.g. "Hitler was an animal." That is why I say that "typically" and not "always" metaphor asserts what is not so. "Notes on Metaphor," *Journal of Aesthetics and Art Criticism*, Vol. XXXIV, Spring 1976, pp. 249-259.

[6] M. B. Hester, "Metaphor and Aspect Seeing," *Journal of Aesthetics and Art Criticism*, Vol. XXV, Winter, 1966, pp. 206-207.

[7] *Op. cit.*, Black, "Metaphor."

[8] S. Kjorup, "Film as a Meetingplace of Multiple Codes," in D. Perkins and B. Leondar, eds., *The Arts and Cognition*, Baltimore: Johns Hopkins University Press, 1977, p. 32.

[9] *Time Magazine*, December 21, 1970.

[10] D. Levine, *Pens and Needles* Boston: Gambit, 1969.

[11] Walker Art Center, *Oldenburg: Six Themes*, Minneapolis: The Walker Art Center, 1975.

[12] S. Worth, "Seeing Metaphor as Caricature," *New Literary History*–A Journal of Theory and Interpretation, Vol. VI, Autumn, 1974, p. 198.
[13] D. F. Wyatt and D. T. Campbell, "On the Liability of Stereotype or Hypothesis," *Journal of Abnormal Social Psychology*, Vol. XLVI, 1951, pp. 496-500.
[14] D. Perkins, "A Definition of Caricature and Caricature and Recognition," *Studies in the Anthropology of Visual Communication*, Vol. II, 1975, pp. 1-24.
[15] "Tolerant" here must be taken to mean tolerant of counter-evidence. Nelson Goodman has pointed out to me that it would be misleading to suggest that metaphor involves simply a looser fit. Something only metaphorically an x may fit better the, say, appearance of x than something literally an x. I would suggest this example: the cloud may look more like a camel than a real camel seen as a dot on a distant hilltop. But even so, the cloud still is seen with more tolerance of counter-evidence than is the dot, which does not manifest counter-evidence of camelhood though it manifests a less camel-like appearance.
[16] Kindly responding to a draft of this paper, Max Black has asked me how contrary recognition would relate to the seeing of ambiguous figures like the duck-rabbit. Though both involve a sort of perceptual shift, I would say that the two were not necessarily the same. Consider a person encountering the duck-rabbit figure for the first time. Discovering (say) first the duck and then the rabbit, he would not be shifting to anything any more contrary to the evidence than his first impression. However, he would find a new identification displacing an old one. Therefore, this would be contrary recognition in the sense of contrary to prior identification. Consider, however, a person thoroughly familiar with the duck-rabbit figure shifting back and forth between the two guises at will. I would not call such shifting contrary recognition, because I would not call it recognition at all. One does not usually say that one recognizes something when one already knows it to be there and simply looks to see it.
[17] An earlier version of this methodology is described in D. Perkins, "A Better Word: Studies of Poetry Editing," in D. Perkins and B. Leondar, eds., *The Arts and Cognition*, Baltimore: Johns Hopkins University Press, 1977, pp. 246-283.
[18] *Op. cit.*, Hester, "Metaphor and Aspect Seeing," pp. 210-211.
[19] A. Rothenberg, "Homospatial Thinking in Creativity," *Archives of General Psychiatry*, Vol. XXXIII, 1976, especially pages 18-19.
[20] Even this conclusion is somewhat bold in generalizing over the many varieties of metaphor and simile. Barbara Leondar has developed a "scale of figuration" which very effectively organizes kinds of metaphor and simile, and she notes that many writers about metaphor have erred in taking as typical of metaphor what only holds of one kind. So far as I can tell, the concept of contrary recognition would apply to some instances of each of her types. *The Structure and Function of Metaphor*, unpublished doctoral dissertation, Harvard Graduate School of Education, 1968.
[21] E. H. Gombrich, *Art and Illusion*, Princeton: Princeton University Press, 1960.
[22] To speak of "reading" a representation is to credit not only the contrary aspects of representations but also the conventional aspects, and the fact that representations, like text, are scanned to evolve an integrated apprehension. See, for example, P. A. Kolers, "Reading Pictures and Reading Text," in D. Perkins and B. Leondar, eds., *The Arts and Cognition*, Baltimore: Johns Hopkins University Press, 1977, pp. 136-164; P. A. Kolers, "Some Formal Characteristics of Pictograms," *American Scientist*, Vol. LVII, 1969, pp. 348-363; E. H. Gombrich, "Illusion and

Visual Deadlock," in E. H. Gombrich, *Meditations on a Hobby Horse*, London: Phaidon Press, 1963, pp. 153-159.

[23] *Op. cit.*, Goodman, *Languages of Art*, Chapter I, section 8.

[24] Sample positions from this extensive debate can be found in the above reference, and in J. J. Gibson, "The Information Available in Pictures," *Leonardo*, Vol. IV, 1971, pp. 27-35; N. Goodman, "On J. J. Gibson's New Perspective," *Leonardo*, Vol. IV, 1971, pp. 359-360; T. G. Roupas, "Information and Pictorial Representation," in D. Perkins and B. Leondar, eds., *The Arts and Cognition*, Baltimore: Johns Hopkins University Press, 1977, pp. 48-80; J. M. Kennedy, *A Psychology of Picture Perception*, San Francisco: Jossey-Bass, 1974.

[25] *Op. cit.*, Sparshott, "The Limits of Metaphor," pp. 92-93.

[26] D. Perkins, "Talk about Art," in S. S. Madeja, ed., *Arts and Aesthetics: An Agenda for the Future*, St. Louis: CEMREL, Inc., 1977, pp. 279-304; H. Gardner, E. Winner, and M. Kircher, "Children's Conceptions of the Arts," *Journal of Aesthetic Education*, Vol. IX, 1975, pp. 60-77; H. Gardner, "Style Sensitivity in Children," *Human Development*, Vol. XV, 1972, pp. 325-338; M. J. Parsons, "A Suggestion Concerning the Development of Aesthetic Experience in Children," *Journal of Aesthetics and Art Criticism*, Vol. XXXIV, spring, 1976, pp. 305-314; B. Wilson, "An Experimental Study Designed to Alter Fifth and Sixth Grade Students' Perception of Paintings," *Studies in Art Education*, Vol. VIII, 1966, pp. 33-42; B. Wilson, "The Relationships Among Art Teachers', Art Critics' and Historians', and Non-art-trained Individuals' Statements about *Guernica*," *Studies in Art Education*, Vol. XII, 1970, pp. 31-39; B. Wilson, "The Relationship between Years of Art Training and the Use of Aesthetic Judgmental Criteria among High School Students," *Studies in Art Education*, Vol. XIII, 1972, pp. 34-43.

[27] *Op. cit.*, Goodman, *Languages of Art*, Chapter II.

[28] *Op. cit.*, Gombrich, *Art and Illusion*, Chapter VI, section II.

[29] K. R. Beittel, *Mind and Context in the Art of Drawing*, New York: Holt Rinehart and Winston, 197, pp. 73-75.

[30] *Op. cit.*, Gombrich, *Art and Illusion*, Chapter V.

[31] *Op. cit.*, Goodman, *Language of Art*, pp. 71-85.

[32] C. S. Lewis, "Bluspels and Flalanferes," in M. Black, ed., *The Importance of Language*, Ithaca, N.Y.: Cornell University Press, 1969, p. 46.

[33] *Ibid.*, p. 48.

[34] Personal communication; and, in part, V. Howard, "Artistic Practice and Skills," in D. Perkins and B. Leondar, eds., *The Arts and Cognition*.

[35] Israel Scheffler has drawn to my attention a closely related case. In his *Conditions of Knowledge*, Scheffler notes how one may have "grasped the rule governing each step in an argument and yet . . . have felt that one had missed the full point." Scheffler develops this example at some length. Israel Scheffler, *Conditions of Knowledge*, Scott, Foresman and Company, 1965, pp. 70-73.

[36] B. Leondar, "Metaphor in the Classroom," in R. A. Smith, ed., *Aesthetic Conceptions and Education*, Champaign: University of Illinois Press, 1970.

[37] This article was written at Project Zero, of the Harvard Graduate School of Education, operating under National Institute of Education Grant G-00-3-0169. The opinions expressed here do not necessarily reflect the position or policy of the supporting agency, and no official endorsement should be inferred. I would like to thank Max Black, Howard Gardner, Nelson Goodman, and Israel Scheffler, each of whom, without being asked for a critique, raised helpful points in response to a draft of this paper.

Art, Criticism, Reading

EDMUND BURKE FELDMAN

In dealing with the relations between art and language it is important that three points be made from the standpoint of the art educator. They are as follows: (1) we have long been engaged in reading visual images and teaching students to read them in the normal course of our work; (2) we are very interested in the light that art can throw on the work of learning to read other languages; (3) in cooperating with specialists in reading and language education, we believe that we can maintain our professional identity and continue to function as art educators. This stipulation is not made for narrow guild or trade unionist considerations, although it is true that art teachers have often attached themselves to educational and cultural trends that are only partially related to the areas of their expertise. For myself, the relation between art and reading is natural and unforced; it runs deeper and should last longer than our present dalliance with hemispheric brain research, art for the handicapped, therapy for the emotionally disturbed, and so on.

The vital connection lies in our common interest in language. Teachers of art and of reading have both been engaged in learning how to decipher well-established languages. Learning to read also involves learning *to use* language. There is a reciprocity between reading and writing that is not unlike the reciprocity between seeing and making. Furthermore, we study and teach our respective languages for roughly the same reasons: understanding and delight. Perhaps, then, the problems of print literacy are not very different from the problems of art literacy. In that case we may be able to help each other.

For the past several years investigators at the University of Georgia have been doing research in the area of art criticism. Our work has been aimed at the improvement of regular art instruction in the schools. Using a systematic method of art criticism[1] we have been able to demonstrate a significant enhancement of students' ability to learn the art concepts typically identified as the goals of instruction in traditional studio and art appreciation programs. Furthermore, these good results have been achieved in several instances with minority group populations. A few of our investigators[2] noticed that there were incidental gains in reading and general language skills on the part of students who had received intensive instruction in art criticism. Hence we began to carry out studies whose primary focus was the connection between art criticism and reading.

In an informal study conducted by Nancy Smith tentative findings revealed a dramatic improvement in the perceptual and conceptual development of pupils who had been identified as unready for reading instruction. Ms. Smith worked with a group that was markedly below the median in standardized tests of visual perception and concept development. Yet, after six weeks of instruction in art criticism stressing identification and analysis, two-thirds of her group moved well above the level where remediation and visual training were considered necessary.

We can offer a tentative explanation of the improvement in reading readiness brought about by instruction in art criticism in a situation where conventional language arts instruction was unavailing. First of all we suspect that many reading teachers operate on the assumption that pupils already possess (by the first grade) the concepts of space, direction, dimension, quantity, time, sequence, and likeness that are prerequisite to learning to read. It is understood, of course, that where these concepts are not present, remediation is necessary. But where remediation takes the form of word recognition drills, it appears that pupils are not greatly helped. And that is frequently because they lack concepts for such fun-

damental relations as are expressed by the prepositions: above, below, beside, behind, before, into, etc. During the stage of formal analysis in art criticism, however, pupils gain considerable experience with precisely these "prepositional" concepts. Learning to read images is not only a matter of recognizing and using words; it is a matter of *seeing* words as relations in the concrete, that is, sensory, manifestations of a work of art. Misuse of the terms that designate spatial, quantitative, and sequential concepts can be immediately corrected—by the teacher, by classmates, or by pupils themselves. The perceptual encounter with the work of art amounts to an interaction with a superior form of technology, so to speak, for the identification, recognition, and reinforcement of the fundamental concepts needed by pupils who are about to receive instruction in reading.

I submit that teachers of reading could do their work more effectively if their pupils already knew how to read visual images. That is because children encounter life in the form of sensory, mainly visual, images before they encounter life in the form of written words. Now spoken words do not look like what they designate; and written words do not look like spoken words. So learning to recognize pictures of sounds, which are symbols of actions, objects, quantities, and locations, is a difficult business. But artistic images have a considerable advantage here: many of them resemble what they designate. So they are useful in learning to recognize the connections between spoken words and specific actions, objects, quantities, and locations. I maintain that teaching children to read images is easier than teaching them to read words. So it should be done first, the purpose being to establish the idea of a language outside one's body, the idea of a formal code that can be deciphered. Of course, there is nothing very revolutionary about this proposal; using pictures to get children ready to read has been going on in kindergartens for a long time. What the art teacher offers, distinctively, is acquaintance with many kinds of visual images; experience with many kinds of formal or syntactic visual relationships; and much practice in reading or decoding artistic images.

One of the reasons why I applaud cooperation between teachers of reading and teachers of art has to do with the importance of what might be called "inter-media fluency." By this I refer to a mode of perceiving, thinking, and behaving that all of us engage in most of the time. During our waking hours we are continuously involved in "translating" messages from one medium into behavior in another: we see a traffic signal and cross the street; we read an advertisement and buy the product; we hear a joke and laugh; we go on vacation and write a postcard. The connections

between seeing and walking, reading and buying, listening and laughing, or traveling and writing, are by no means simple; they entail the interpretation of experience not only in terms of meaning but also in terms of appropriate behavior in an appropriate medium. From this I conclude that people who understand what they read in an exclusively lexical manner are only partially literate; although they can decode messages in a particular medium, they may not be able to make the necessary translation into another medium. The real completion of a linguistic transaction almost inevitably calls for translation into another language. I think that is one implication of Goethe's remark: "A man who does not know foreign languages is ignorant of his own." It may be safe to say that literacy in one medium is only partial literacy for practical purposes. And to be partially literate is to be handicapped; to live in the world one must be fluent in several media. One must *know* in order to be intelligent; but one must know *how* and *when* and *what* to be wise.[3]

The art historian René Huyghe has raised a fundamental question for us: "Is art a language?" His answer bears importantly on our subject: "Although the vocabulary of art consists of images rather than words, it is based on the store of *common experiences* (italics mine) that make human communication possible. Just as every word in use in a language corresponds to an idea that can be defined in a dictionary, every identifiable image evokes the memory of a familiar sensation."[4] Some of us are inclined to resist the idea of art as a language because we are familiar with the widespread commitment to the romantic doctrine of art as self-expression. We know that while "expression" implies a desire to communicate, it is often mainly devoted to the release of pent-up energies. Such a release may be symptomatic; it may even be therapeutic; but insofar as it refers only to the self, is it language? I think it is, even in the rather extreme example I have given. Once we come into contact with visual forms, regardless of the motive of the maker, or the purpose the forms were made to serve, a potential for reading has been created. The peculiar magic of the artistic image is such that it establishes connections with our "store of common experiences" whether it was meant to communicate or not. What I am saying is that as long as there is human behavior, language is inescapable.

One of the positions a linguistic philosopher might take is that reading works of art and reading written language are radically dissimilar activities. This would imply that the word "reading," insofar as it applies to examining works of painting, sculpture, and architecture, is no more than

a metaphor, a poetic way of comparing art criticism with lexical understanding. The alternative position—the one I take here—is that "reading" is a comprehensive term that embraces all ways of making sense out of man-made signs, symbols, and structures. I believe we are not irresponsible in using the term "reading" to designate the geologist's reading of the terrain, the detective's reading of clues, the soothsayer's reading of tea leaves, the sailor's reading of the sky, the iconographer's reading of a painting, and the literary critic's reading of a poem. There are commonalities in the approach of all these specialists to the types of "evidence" they characteristically examine, and these commonalities account for our use of reading as a generic term. The principal commonality is seeing, and here I shall cite Spencer's maxim: "Reading is seeing by proxy."

The word-image relationship is one of the most fascinating in the history of art. Since the doctrine *ut pittura poesis* was first advanced by Horace, artists have been engaged in an alternately cooperative and hostile relationship with writers, printers, and wordmen. In general, we may say that the movement toward modernism has been accompanied by a progressive estrangement of artists from writers. Artists know about or instinctively recall a medieval master-servant relationship that outrages their sense of creative independence. The role of artistic subordination to literary men seems to persist right into the contemporary advertising agency where illustrators and graphic designers usually take instructions from marketing executives and copy writers, that is, wordmen. But we should note that the commercial message is increasingly iconic; verbal language is dominant in the organizational effort that produces a persuasive image. It is true that a number of contemporary painters and printmakers have incorporated words into their work, but it is on their own terms: the words are used for calligraphic or decorative purposes. I think they still feel that the use of words for cognitive reasons constitutes a declaration of creative bankruptcy. So if we want to see good examples of cooperation between word-wielders and image-makers we cannot find them in the so-called fine arts; we must look to advertising art and television graphics. Here a marriage, with the image as dominant partner, has been consummated under the impressive auspices of commerce. And significantly, it is here that "education" or mass persuasion is the main objective.

Everyone agrees, I believe, that it would be desirable for television to become an educational medium in the best sense. Now there is some suspicion that in viewing television most children are responding to, rather

than reading, its imagery. That is, they do not *distance* themselves sufficiently from what they see; they do not so much comprehend as stare. They are not aware of the visual devices—closeup, juxtaposition, movement, focus and framing—that govern their responses. So they perceive TV imagery as if it were lived reality rather than an artistically shaped representation of lived reality. This loss of "psychical distance," as Bullough would express it,[5] occurs more often when viewing images than when reading print because of the greater formality and abstractness of written language. Hence the reader of print has at least one line of defense against potentially harmful or dishonest written messages; the necessity of reading, that is, of translating written language into ideas and behavior, creates a pause, however brief, that permits the exercise of moral, cognitive, and aesthetic discrimination. Unfortunately, we have not reached that point in our commerce with television and motion picture imagery. Furthermore, the ideology of art education has tended to encourage "appreciation" of artistic images in general; it has less frequently taken a critical approach. So we have much to learn from our brethren who teach the use of verbal languages, particularly about the processes involved in the comprehension and interpretation of any code.

For me the main connection between art and reading emerges through art criticism. When we teach art criticism, we encourage pupils to perform essentially the same operations with shapes, colors, locations, size relationships, and so on, that teachers of language want them to perform with words. We do not require that our students possess a fund of art historical knowledge; we do rely on a fund of life experience. Children who have slipped or stumbled, climbed or descended, lifted or carried, walked through doors or stood next to each other . . . these children already possess considerable experience with location, sequence, quantity, action. In teaching them to criticize works of art we teach them to apply their experience to the understanding of particular instances of visual form. It is a progressive process of objectifying perception, of isolating forms from their real-life contexts, reading them as language, and carrying them back to real life. Our ultimate aims are largely the same as those of teachers of reading: comprehension, enjoyment of language, perception of affective qualities, retention of information, and apprehension of ideas. Unfortunately, the term "art criticism" has judgmental connotations that can be counter-productive in teaching situations. As for "art appreciation," it sometimes suggests the suspension of our capacities to discriminate among meanings and values. But in teaching, at least, it is

difficult to find any other term that means what art criticism means. It must be admitted, too, that the term "criticism" has been mainly understood as if it were the expression and justification of opinions. Unfortunately that has obscured its meaning as description, analysis, and interpretation.

We begin the critical process with the identification of the persons, objects, or forms that are visible in a work of art. This operation corresponds to word recognition in reading; it assumes that the viewer already knows *the names* of the things he sees. Of course, if the pupil does not know

the name of a shape, say an oval, or a color, say purple, the teacher can point out the connections between that shape or color and the words we use to label it. Children soon learn that everything can be named. Hence a certain amount of vocabulary building is done by art teachers, who, be it noted, have the considerable advantage of dealing with names and labels while looking at the forms they designate. No need to use diagrams. Fortunately, the number of nouns required in critical identification and description is not very great; the richness of art critical language depends on combinations of words—fairly simple combinations that are used to de-

scribe, analyze, and interpret fairly complex relationships.

A primary goal in teaching art criticism is to develop the concept of a cognitive system. It is *the system* which gives the viewer access to the meanings of a work. Learning the names of objects and forms is essential, but it is not as important as knowing how these names are used in the set of operations that leads to comprehension. Children are fascinated with naming because they realize that they are engaged in performing a systematic act. They are engaged in the great game of taking possession of a thing by giving it a name. The resemblance between the image and its referent makes it easier for a child to be aware of his involvement in systematic behavior. Systematic behavior—recognizing the connectedness between symbols and things—is a rudimentary form of cognition.

Visual analysis is the stage of art criticism that follows the naming and identifying of forms and objects immediately seen. When we ask children to describe size and space relationships, for example, we are operating at a fairly sophisticated linguistic level; yet most children can do this easily. They engage in a syntactical operation performed with artistic forms instead of written or printed letters. Our "secret agenda" is to beguile them into noticing size, shape, and space relations so that they can perceive the atomistic elements of a work of art in the aforementioned systematic sense. Cassirer speaks of "releas(ing) the bond between words and things"[6] when learning to use a language. We do the same thing in art criticism. Surreptitiously, so to speak, we encourage the student to describe an object in terms of its function within the visual complex before him. That operation obliges the student to see forms as interchangeable parts in a system; he sees that the meaning of a form depends on its location within the system as well as its mimetic relation to an object outside the system. Afterward, these visual forms will be inflected like words by virtue of their size, color, shape, etc. Thus students learn to see visual relationships functioning as the equivalents of subjects and predicates, nouns and adjectives, verbs and adverbs.

What do we mean by visual comprehension? Perhaps our work in art criticism provides some hints about comprehension in general. In the critical process comprehension corresponds to the stage of interpretation. That is the stage when a viewer attempts to discover the meaning or meanings of the various objects, forms, and relationships he has noted in the course of describing and analyzing a work of art. But what is the meaning of "meaning" in this context? For the critic, meaning takes the form of a written or spoken statement that organizes a set of observations made on a

particular aesthetic occasion. Let us suppose that a viewer chooses not to act as a critic; that is, he prefers not to make a statement about a work of art. Can we say that it has no meaning for him? Of course not. The work *signifies* for that person; he has decided not to make its significance public. Still, that person performs as a critic—a critic for a public of one. The work *signifies* for the critic acting on behalf of himself because that person has done the work of organizing his perceptions in the presence of the art object. So the problem of meaning has to be approached in terms of what the critic does to create unity or coherence among his perceptions.

How do we organize our perceptions on an aesthetic occasion? We try to order them in a satisfactory, a congenial, sequence. By arranging a set of perceptions in alternate orders of priority, we try to find the pattern or sequence that (a) includes the largest possible number of observations, and (b) corresponds with similar observations we have made in "real life." A congenial sequence of perceptions is one that manages not to leave out important visual data. As a practical matter we never succeed completely with (a) or (b). There is always some perceptual material that is "left over"—material that is irrational in the ancient Pythagorean sense. Furthermore, the correspondences between our observations in life and in the realm of art are never exact. But our desire to make these separate realms fit can lead to an imaginative reconstruction of life, on the one hand, or a new reading of the work of art, on the other. In both cases we have what might be called a learning situation. It is in the discrepancies between our perceptions of reality and our perceptions of art that the possibility of growth arises.

Organizing our perceptions on an aesthetic occasion might be called *sequencing* and *matching*. Let me discuss *sequencing;* it is essentially a syntactical operation. In a Cézanne still life, for example, we may decide to see the tablecloth before we see the apples that rest on it because (a) that sequence maximizes our pleasure in the apples, that is, their reds and greens are redder and greener after we have seen the whiteness of the tablecloth (b) the quantity of white declares itself before the quantities of red and green; (c) the form of the tablecloth "tells us" to see its concavity before we examine the convexity of the apples. That is, the cloth holds or "makes room" for the apples in the manner of a container that holds its contents. Now the viewer may experiment with alternative sequences. There may be dividends in seeing the apples before the cloth. How does he decide which sequence is best?

Well, there is no good reason why he must commit himself to a single

"reading." The art critic is free to employ more than one sequence or reading as the mood strikes him. Critics can choose their frames of reference: that is what makes them good or bad critics. In an adventurous frame of mind a critic may abandon the logic of life (that is, of a containing form making room for its contents) because he enjoys a sense of liberation from Newtonian physics. He may also be perceptually overloaded and find it restful to see apples (heavier than normal apples) sitting securely in the convenient hollows of a mountain of cloth. The important point is that alternate modes of sequencing the Cézanne still life do not constitute a scandal or a misreading; each reading yields its distinctive meaning or pleasure. That pleasure is contingent, however, on the critic's choice of a syntactical order. Different perceptual strategies yield different kinds and qualities of meaning. But there can be no doubt that syntactical choices must be made and that further perceptual work must be undertaken as a consequence of those choices. What the viewer learns is that the meanings and satisfactions he derives are not arbitrary; they are contingent on his syntactical choices. That's reading.

The concept of matching has its origins in Aristotle's theory of art as *mimesis*. Whether we agree with Aristotle or not, it must be plain that people are natural matchers: they spontaneously compare what they see to what they have seen. That spontaneous, untaught mode of matching or comparing is not to be disdained: it constitutes a basic type of cognition. We cannot know or recognize something except in relation to something like it that we already know. But whence cometh that prior knowing? It arises from our recollection of things seen and remembered. Present knowing is built on a foundation of prior perception. (I shall not here attempt to discuss innate knowing, or knowledge carried by "deep structures" that are presumably passed on from parent to child at the moment of conception.) For our purposes, the similarities and dissimilarities between prior and present perception create the occasion for *matching*, an operation that lies at the heart of the process of visual cognition. On the one hand the viewer "reads" the work by attending to its internal or syntactic relationships; on the other hand he attends to its representational, mimetic, or semantic relationships.[7]

When the critic concentrates on evaluation, his work cannot go forward unless he has already understood or interpreted the work of art. This is to say that he cannot explain or judge a work if he has not read and explicated its components. By explication I mean the kind of visual analysis of parts that enables us to make a stab at understanding wholes. Gestal-

"Still Life" Paul Cézanne
Collection, National Gallery of Art,
Washington, D.C.
Gift of W. Averell Harriman Foundation

tists, I realize, maintain that the perception of wholes is the natural way of taking in the reality of an experience. But I am talking about art criticism, which is a cultural rather than a natural enterprise. Reading a work of art is "unnatural." So is the reading of a printed text. The business of dealing with language in a reflective, interpretive, or critical manner has to be artificial; it has to be conducted according to rules, and such rules have to be learned. After all, it is possible to grow up illiterate, which is to say, without having learned the rules for decoding language. One of those rules is that explication precedes interpretation. That is, the reader must explain the parts of a poem or a painting before he can understand its total meaning. So let us dispense with talk about the natural or spontaneous reading of works of art. The possession of normal eyesight and curiosity is not enough. The untrained viewer can look at a great painting (as a cat can look at a king) and remain as sublimely innocent of its significance as a donkey gazing at scripture—looking much and seeing little.

Recognizing words as symbols is one of the prerequisites for learning to read. That is when the reader learns *to forget*, or *not to see*, the particular details of the letters that form a word, he recognizes instead their general configurations, the sounds designated by these configurations, and the meanings of the sounds considered as spoken words. This is to say that the reader learns "to see" speech in the patterns of marks we call writing. Now the earliest mode of seeing—as in the seeing of children or of preliterate men—emphasizes the perception of sensuous particulars. The primitive stages of culture in general stress the significance of discrete sensations. It is difficult to make the leap from sense perception to the perception of abstract symbols. That is why our most precise and unambiguous language from the standpoint of cognition is mathematics while at the same time it is probably our least interesting language from the standpoint of sensuous appeal. Indeed, one of the penalties we pay for being civilized is a loss or displacement of the capacity to attend to "pure" movement, sound, color, and shape. The compensation for that loss is the capacity "to see" ideas. Perhaps the thrill of reading is based in part on our mastery of the specialized perceptual skills that permit us to translate sensations into sound patterns, into words, into symbols and ideas.

The business of reading images *also* involves the translation of sensations into patterns, forms, symbols, and ideas. It is a mistake to believe that aesthetic perception is indifferent to the apprehension of symbols, that it is totally involved with the surface excitement of the art object. For one thing, I doubt that a purely sensational reading of a work is possible from

a neurological, much less a psychological, standpoint; the mind of man seeks meaning as the moth seeks the flame. It is only under the influence of a frequently abused doctrine—formalism—that we pretend to be unaware of the cognitive import of form. The deliberate forgetting of art's capacity to sustain meanings creates a stumbling block for art education in general and for cooperation with workers in the field of language development. Falling back on the thrill or joy of the art experience becomes a device for denying the role of intellection in perceptual work.

The kind of visual perception we call formal or syntactic is sometimes thought to yield a distinctively aesthetic pleasure. It is the sort of pleasure that mathematicians allude to when they speak of an "elegant" solution. Here let us concede the existence of that elegant, purely internal delight, a delight that has no connection to social concerns, psychological affinities, or biological needs. Even so, it must be clear that syntactical pleasures are somewhat rarefied, that is, infrequent in the normal experience even of exceptional men and women. From the standpoint of the history of art (that is, a span of activity at least thirty thousand years old) it appears that aesthetic needs are a late development. If they were felt by Aurignacian and Magdalenian hunters, these men would have had to wait until the late 18th century in Europe before their needs were recognized. So if we want to build linguistic theory, or pedagogical method, on an artistic foundation we should seek our materials in the large body of imagery that preceded the emergence of the sort of art that acts on the organism like an aspirin, a stimulant, or a consciousness-expanding drug.

A good deal of art instruction is conducted as if a childlike or primitive mode of seeing were highly desirable. One can go further and assert that certain types of contemporary art are created for the sake of promoting a childlike, that is, an essentially sensational or infantile mode of seeing. What we have, then, is an ideological and educational situation in which preliteracy and anti-literacy become the marks of a sophisticated person. Advocates of this notion of art and education unwittingly perpetuate the dichotomy of intelligence and feeling that has been institutionalized (for the sake of classification) in such well-known polarities as Classic-Hellenistic, Renaissance-Gothic, Poussiniste-Rubeniste, Neoclassic-Romantic, and Cubist-Expressionist. Art educators are especially fond of Alois Riegl's antinomy, visual-haptic, which they have learned from Viktor Lowenfeld. Bloom's cognitive-affective antinomy of learning may be another symptom of the general tendency to dichotomize mental and emotional life. The effect of these dichotomies,

whether intended or not, is to produce adults for whom the cognitive function of language is suspect because, as Stephen Koch puts it, they have accepted "the numbing fog of a politicized and mysticized ideology of illiteracy."[8] By confining the making and study of art to the so-called affective realm, we ignore a large part of its educational potential and, I regret to say, contribute to the mental arrest of those children for whom artistic images would be intellectually stimulating.

It would seem that the process of learning a language involves a progression from attending to sensuous particulars to grasping symbolic universals. The pleasure of attending to particulars is related to the stimulation of nerve endings; the pleasure of grasping universals is related to the recognition of patterns. Visual art manages to yield both kinds of pleasure—if not simultaneously, then in close succession. Reading words, on the other hand, is almost wholly a challenge to our powers of pattern recognition. The representational element—the imitation of speech—is not directly perceptible; it must be inferred from recognition of a phonetic code, a code that requires further translation. Pattern recognition yielded more satisfaction at the ideographic stage of the evolution of writing. Therefore, in its present highly abstract stage of development, the mastery of reading and writing encounters serious problems: it asks a public habituated to instant gratification to postpone the immediate pleasures of visual cognition in favor of higher satisfactions later on. But a public reared on television viewing (which seems to provide instant knowing) seriously disbelieves in the existence of "higher satisfactions" later on. For that public, reading is not better, only more difficult.

Nevertheless, modern technocratic societies cannot function without a good supply of skilled readers. Perhaps, as I have suggested elsewhere,[9] reading will soon be the exclusive skill of a small caste of mandarins. In that case our democratic political institutions will not survive. Without the ability to read, and read well, the masses of our people will have no means of judging or resisting the instructions they get from the media. Film, television, packaging, journalism, and advertising will rely increasingly on images and decreasingly on written words. This is apparent as the agelong relation between image-makers and wordmen is being reversed. Today television is our *biblia pauperum,* and the managers of the media are our masters.

Still, I believe we can teach large numbers of children to read art, not only for its own sake but also for the sake of learning to cope with the new arts, the media that are so accurately designated "information and com-

munication design." Beyond that, we can teach them to read words and sentences. Of course there is much research that needs to be done, especially with regard to the transfer of learning from art criticism to the reading of spoken and written language. When it is done, we should be able to increase the number of good readers in general. But we must insist that reading be bi-lingual. That is, our students must know how to use the language of words to deal with the language of images, and vice versa. If we do this, I can imagine a time when we shall enjoy films and television and paintings and poetry even more than we do now. Because we shall *know* what they are really saying.

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[2] Shirley Lee Bolton, *A Study of Perceptual Growth When Using Contrasted Strategies in Teaching Art to Rural Deprived Children,* a dissertation in partial fulfillment of the requirements for the degree of Doctor of Education, University of Georgia, 1970.

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[4] Rosalind Dorothy Ragans, *The Effects of Instruction in a Technique of Art Criticism Upon the Responses of Elementary Students to Art Objects,* a dissertation in partial fulfillment of the requirements for the degree of Doctor of Education, University of Georgia, 1971.

[5] Ernst Cassirer observes in this connection: "A theory of language has other and more urgent tasks to accomplish (other than solving linguistic and grammatical problems). It has to teach us how to speak and to act in our actual social and political world." *An Essay on Man,* Doubleday Anchor, 1953, p. 148.

[6] *Ideas and Images in World Art,* Abrams, 1959, pp. 99-100.

[7] " 'Psychical Distance' as a Factor in Art and an Esthetic Principle," *British Journal of Psychology,* Vol. V., 1913.

[8] Ernst Cassirer, p. 172.

[9] I am relying here on Charles Morris' semiotic theory in which semantics designates the relation between a collection of signs and what they express *outside* the system in which they are encountered. Charles W. Morris, *Signs, Language and Behavior,* Prentice-Hall, 1946.

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Kenneth Goodman's professional contributions to education have been mainly in the application of knowledge from linguistics and related fields to the improvement of teaching and learning. He is developer of miscue analysis, a psycholinguistic system for studying the reading process through analysis of reading miscues, the unexpected responses of readers. He is an advocate of whole language approaches in literacy development.

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Kenneth Marantz is chairman, Department of Art Education, The Ohio State University. He comments: "I've dabbled in the sciences, toyed with philosophy and literature, and messed around with sculpture. And then I

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D. N. Perkins is co-director of Harvard Project Zero, a basic research program at the Harvard Graduate School of Education investigating cognition, the arts, arts education, and more generally human symbol processing. His special interests include process-tracing studies of poets and artists at work, errors in reasoning, picture perception, and critical judgment. He has co-edited with Barbara Leondar *The Arts and Cognition* (Johns Hopkins University Press, 1977), a collection of papers by Project Zero members. A 1976-77 Guggenheim Fellowship allowed him to write the first draft of a book on creative process.

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